Oracle® Application Server Discoverer Plus

Tutorial

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Oracle Application Server Discoverer Plus Tutorial, 10*g* (9.0.4)

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Part No. B10269-01

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Preface

Welcome to Discoverer Plus - the complete business intelligence (BI) analysis tool that works over the Internet.

Discoverer Plus enables you to query complex databases without having to understand the database language SQL (Structured Query Language). You can use Discoverer Plus to retrieve and analyze data, and produce reports in printed format or a range of electronic formats.

This tutorial is designed to enable a new Discoverer user to quickly learn the basics of using Discoverer. The tutorial takes you step-by-step through the most familiar business intelligence tasks that you need to analyze data.

OracleAS Discoverer Navigation and Accessibility

Keyboard Navigation

OracleAS Discoverer supports standard keyboard navigation. Standard keyboard navigation includes the use of the tab key, mnemonics (using the Alt key and the underlined character), and accelerators (such as Alt+F4 to exit a window).

Changing font sizes and colors for enhanced readability

You can change the font size and color of worksheet items, headings, and totals to make them more readable.

To change the default font size and color of new worksheet items, headings, and totals, choose Tools | Options and specify appropriate settings on the 'Options Dialog: Default Format tab'. To change the font size and color of existing worksheet

items, headings, and totals, choose Sheet | Format and specify appropriate settings on the 'Edit worksheet dialog: Format tab'.

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Intended Audience

Use this tutorial when you want to learn how to use Discoverer to view and manipulate business intelligence data to support business decisions.

Structure

This tutorial contains the following lessons:

- "Introducing Discoverer"
- "Lesson 1: Getting started"

- "Lesson 2: Getting the data you want"
- "Lesson 3: Analyzing data"
- "Lesson 4: Sharing your data"

Related Documents

For more information, see the following manuals:

- *Oracle Application Server Discoverer Plus User's Guide*
- *Oracle Discoverer Administrator Administration Guide*
- *Oracle Discoverer Administrator Tutorial*
- *Oracle Application Server Discoverer Configuration Guide*

Conventions

The following conventions are used in this manual:

Convention	Meaning
File | New	Menu options are shown with a vertical bar separating the menu and the name of the option. For example, File | New indicates the selection of the New option from the File menu.
bold type	Bold type is used to distinguish field names in Discoverer dialogs.
italic type	Italic type is used for the names of other Oracle publications. **Note**: Italic type is also used on reference dialogs to refer to areas of a dialog that have no label.
< >	Angle brackets enclose user-supplied names.
`monotype`	Characters you type are shown in monotype.

Discoverer often gives you several ways to perform an operation. For example, to create a new condition you could:

- choose Tools | Conditions
- click the Conditions toolbar button

Since you might not be using a mouse, the Discoverer documentation always tells you the menu and menu option to choose.

1

Introducing Discoverer

Introducing Discoverer

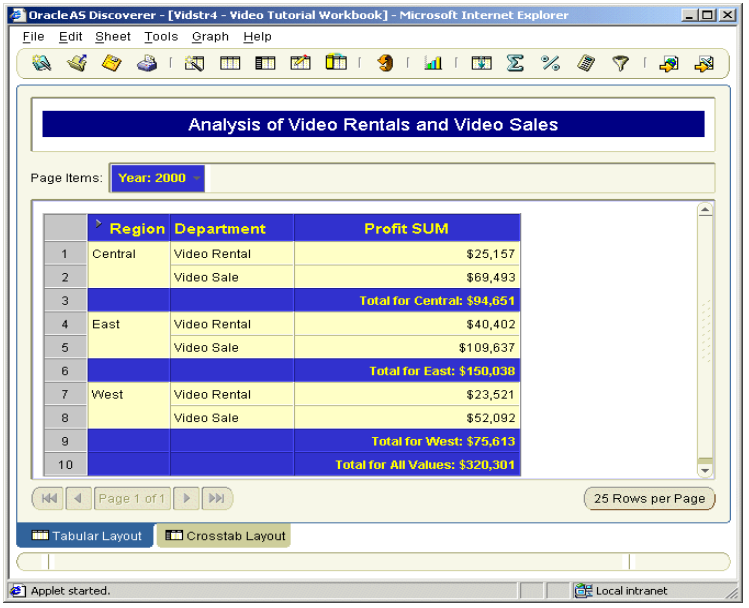
Discoverer Plus is a business intelligence (BI) analysis tool that works over the Internet.

This lesson consists of the following exercises:

- "Using Discoverer to support your business decisions"
- "About the tutorial"
- "About how the tutorial is structured"
- "Advice on using the tutorial"
- "About the Discoverer Plus help system"

The figure below shows the Discoverer Plus main screen, with a worksheet displayed in the workarea that is used to analyze video store profits across geographical regions.

Figure 1–1 Discoverer Plus main screen



Using Discoverer to support your business decisions

Using Discoverer, you can access and analyze data that you know is in your company's database, without having to understand complex database concepts. Discoverer's intuitive wizards and menus enable you to retrieve and analyze data that supports your business decisions. Discoverer does the hard work for you.

About the tutorial

This tutorial explains how to use Discoverer Plus to analyze business intelligence data. The tutorial describes only the most common and basic tasks. For more detailed information or instructions on advanced topics, see the OracleAS Discoverer Plus online Help or the Oracle Application Server Discoverer Plus User's Guide.

The tutorial uses a database that contains information about a fictitious chain of video stores. The database contains information about the video stores, for example location, inventory, and sales. In the tutorial you will use this database to retrieve data, analyze data, and to share data in the form of Excel spreadsheets and HTML pages.

Although your business or organization might be different from a chain of video stores, the basic Business Intelligence concepts are the same. The video store scenario is provided to give you a practical context for using Discoverer.

The tutorial assumes that you know how to use an Internet browser and know the standard conventions of your computer's operating system, such as maximizing and minimizing windows and printing files. However, the tutorial does not assume that you understand database concepts, the SQL language, or how to retrieve data from a database.

About how the tutorial is structured

This tutorial is divided into the following lessons:

- "Lesson 1: Getting started" introduces you to the Discoverer workarea, its wizard dialogs and menus, and also defines key terminology that will help you use Discoverer.
- "Lesson 2: Getting the data you want" describes how to get the data you want from your company's database.
- "Lesson 3: Analyzing data" describes how to analyze your data using Discoverer's powerful analysis tools, such as sorting, pivoting, and drilling.
- "Lesson 4: Sharing your data" describes how to share reports with other business users and organizations. For example, as an Excel spreadsheet or an HTML page.

Lessons are self contained, and comprise a number of exercises. This means that there are no prerequisite steps required for any of the lessons.

Hint: When working through the tutorial, you will work on your own private copy of the Video Tutorial Workbook. When you first open the Video Tutorial Workbook, make a copy of the workbook that you can work on (for more information, see "Exercise 3: Saving a copy of the tutorial workbook").

Advice on using the tutorial

If your computer has a large enough monitor, you should be able to view the tutorial and Discoverer at the same time. Minimize both the Web browser window and the Discoverer window so that you can easily switch back and forth between the two. If your computer has a small monitor, consider printing out each exercise and having only the Discoverer window visible on your monitor.

As you follow the tutorial's instructions, you will occasionally see questions that ask you to think about what you are learning. Click on a question to display the answer to the question. If you are working from a printed page, the answers are listed at the bottom of each exercise.

About the Discoverer Plus help system

The Discoverer Plus Help System gives you context sensitive access to reference information from the Discoverer Plus User's Guide in HTML format.

To start the Help System either click Help in a Discoverer dialog or choose Help | Help Topics.

To find a topic in the Help System:

- click the Contents icon at the top of each help page or choose Help | Help Topics (to see a list of the topics in the help system)
- click the Index icon at the top of every help page to see a list of index entries

To view (and print) the Discoverer Plus User's Guide in PDF format, use the Oracle Application Server documentation CD.

Hint: To search for words or phrases, use the Discoverer Plus User's Guide in PDF format.

2

Lesson 1: Getting started

Lesson 1: Getting started

It will probably take you about 30 minutes to complete this lesson.

In this lesson you learn how to start Discoverer and open the tutorial workbook.

This lesson consists of the following exercises:

- "Prerequisites"
- "Exercise 1: Starting Discoverer Plus"
- "Exercise 2: Opening the tutorial workbook"
- "Exercise 3: Saving a copy of the tutorial workbook"
- "Lesson summary"
- "Frequently asked questions"

Prerequisites

To begin this tutorial, you need one of the following:

- a public connection for accessing the Discoverer tutorial database (e.g. called 'Start tutorial') created by the Discoverer manager
- a user defined connection (also known as a private connection) that you have created for accessing the Discoverer tutorial workbook

  Note: For more information about how to create a private Discoverer connection for accessing the tutorial database, see "How do I create a Discoverer connection for accessing the tutorial database?".

Exercise 1: Starting Discoverer Plus

In this exercise, you will learn how to start Discoverer Plus.

To start Discoverer Plus:

1. Launch a Web browser.
2. Go to the Discoverer web address given to you by the Discoverer manager.

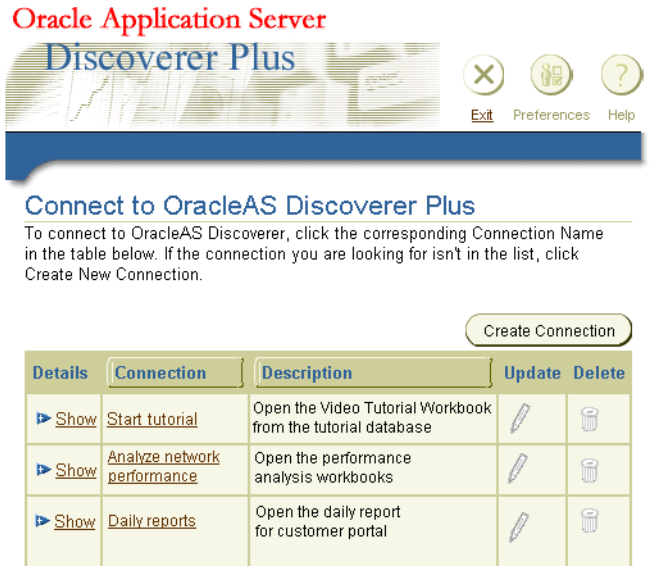
   Note: The Discoverer web site address might be:

   - the default web page that you access when you start a browser
   - an internet address (URL) that you enter in the address field in a browser (e.g. a typical URL might be http:/ / *machinename.myorganization*.com:7778 / discoverer / plus)
   - a link from a portal or other internet or intranet site to which you have access

   Note: The first time you run Discoverer, if you do not have the required software plug-ins, Discoverer installs the required software plug-ins for you.

   The Connect to OracleAS Discoverer Plus page is displayed (see figure below).

Figure 2–1 Connect to OracleAS Discoverer Plus page



Discoverer displays a list of the existing Discoverer connections in the **Connection** column. Connections contain pre-defined login information that enable you to start Discoverer and log in.

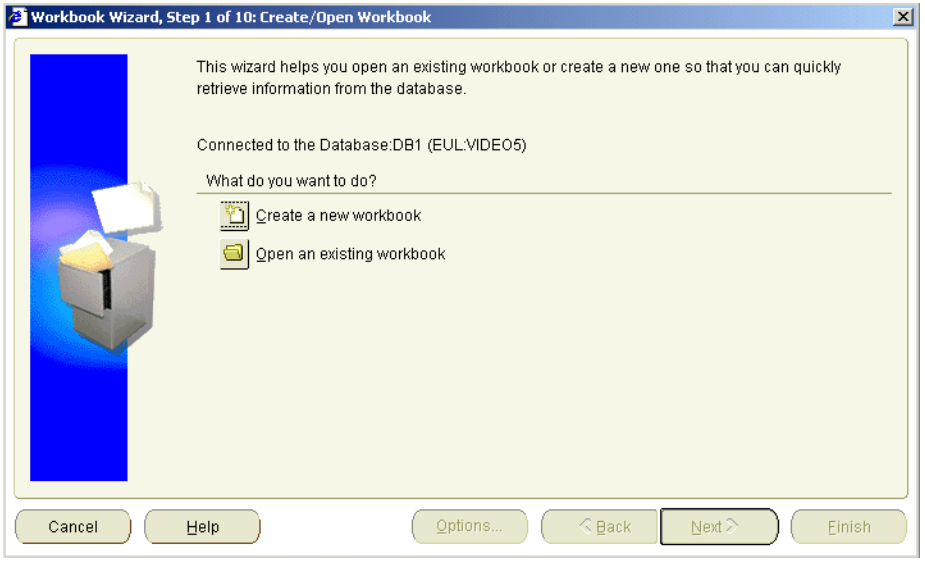
3. Click the tutorial connection name in the **Connection** column to start Discoverer.

   For example, to start Discoverer using a connection called 'Start tutorial', click 'Start tutorial' in the **Connection** column.

   Note: The Discoverer manager will tell you which connection to use.

   After a few moments, Discoverer displays the Workbook Wizard, which means that you are connected to the tutorial database and you are ready to continue with the tutorial.

Figure 2–2 Workbook Wizard: Create/Open Workbook dialog



The Workbook Wizard guides you through the necessary steps for getting the data you want from the database.

You are now connected to the database and can begin using Discoverer's powerful business analysis tools.

Having learned how to start Discoverer, you are now ready to learn how to open a workbook from the database.

Exercise 2: Opening the tutorial workbook

In this exercise you will open the tutorial workbook from the database.

Discoverer stores workbooks in the database.

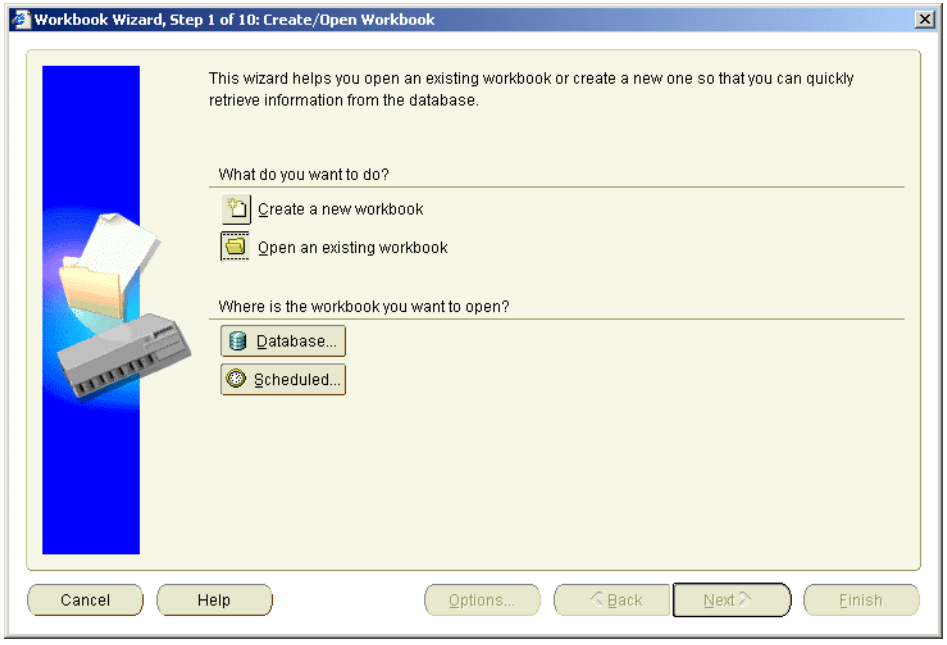
Hint: The Discoverer manager will tell you the name of the tutorial workbook that you need to open. In this tutorial, the workbook is called Video Tutorial Workbook.

Note: Before you can open a workbook, you must start Discoverer (for more information, see "Exercise 1: Starting Discoverer Plus").

To open the tutorial workbook:

1. In the Workbook Wizard, click Open an existing workbook to display the Workbook Wizard: Create / Open Workbook dialog.

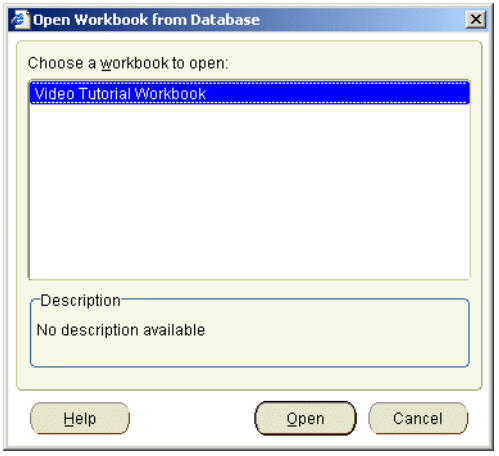
Figure 2–3 Workbook Wizard: Create/Open Workbook dialog



Note: If the Workbook Wizard: Create / Open Workbook dialog is not displayed, choose File | Open to first display this dialog, then begin step 2.

2. Click Database to display the Open workbook from Database dialog, which lists all workbooks available to you.

Figure 2–4 Open Workbook from Database dialog



3. Select Video Tutorial Workbook in the **Choose a workbook to open** list.

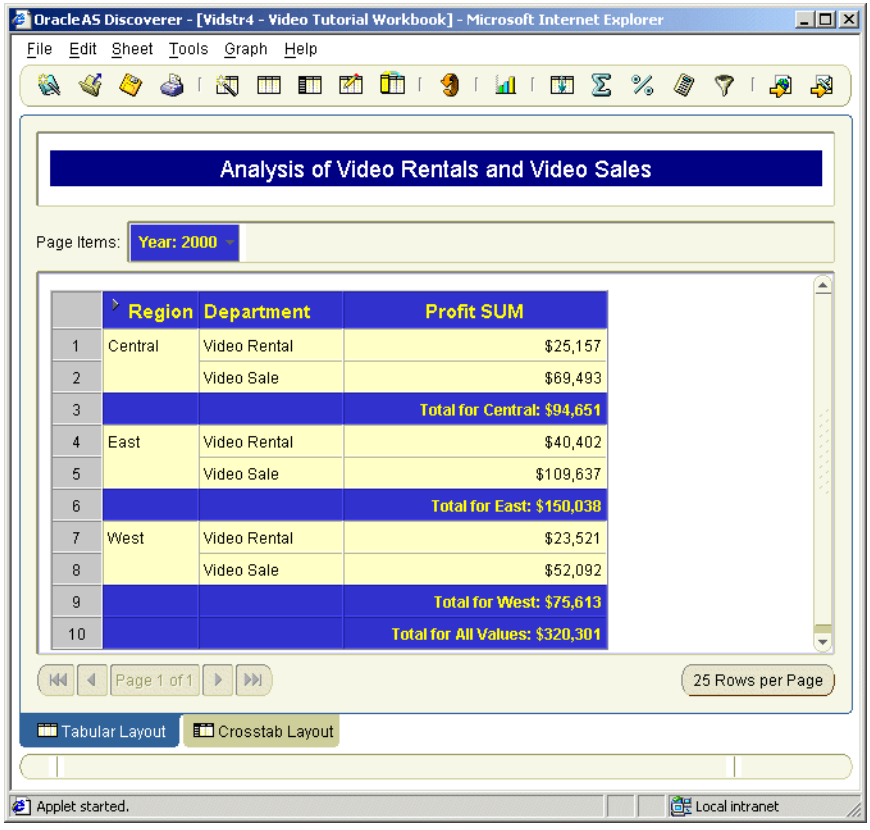
   Hint: The Discoverer manager will tell you the name of the tutorial workbook that you need to open. In this tutorial, the workbook is called Video Tutorial Workbook.

4. Click Open to open the Video Tutorial Workbook.

5. If you are asked whether you wish to run the query for the worksheet, click Yes.

   Discoverer displays the tutorial workbook.

Figure 2–5 Video Tutorial Workbook



Exercise 3: Saving a copy of the tutorial workbook

Before continuing, you need to save a copy of the Video Tutorial Workbook to work on later.

1. Choose File | Save as to display the Save Workbook to Database dialog.
2. Type `Video Tutorial Workbook` followed by your initials in the **New name** field.

   For example, if your initials are A.B, type `Video Tutorial Workbook AB` in the **New name** field.
3. Click Save to save the workbook and close the Save Workbook to Database dialog.

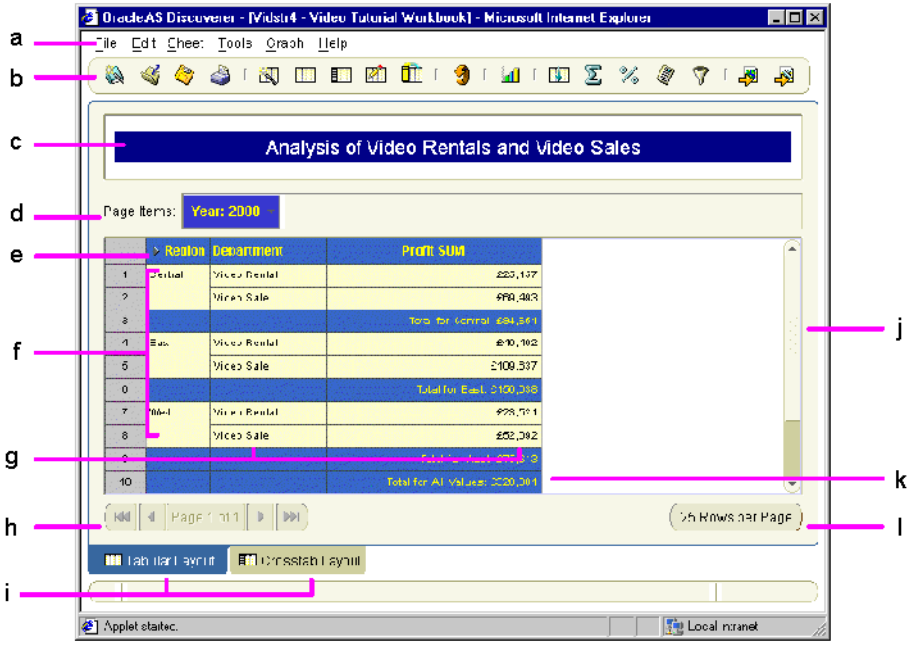
Now that you have saved a copy of the Video Tutorial Workbook to work on later, you are ready to look in more detail at the Discoverer workarea.

Discoverer Plus enables you to analyze data stored in workbooks. Workbooks are Discoverer files containing worksheets that display data retrieved from the database.

Hint: If you are familiar with spreadsheet applications (e.g. Microsoft Excel), think of a workbook as a spreadsheet file, and worksheets as different sheets in that spreadsheet file.

Worksheets contain the data that you want to analyze, together with a number of Discoverer components to help you analyze the data. For example, a worksheet can contain parameters, totals, percentages, and calculations (for more information, see figure below).

Figure 2–6 Discoverer Plus workarea



Key to figure:

a. Menu bar - click on the menu bar to display drop down menus.

b. Toolbar - use the toolbar options as a short-cut to menu options.

c. Title bar - displays the title of the workbook.

d. The Page Items area. In this example, the worksheet contains data for three years: 1998, 1999, and 2000. This page only shows data for 2000. If you select a different year value from the Page Item drop down list, Discoverer displays data for that year.

e. Top Axis showing item headings.

f. Left Axis - showing item values.

g. Data Points - notice that data is organized in rows and columns similar to a spreadsheet. The worksheet contains four items from the database: Year, Region, Department, Profit SUM. The items Region, Department, Profit SUM are columns on the worksheet. The Year item is a page item, which means that you display data for one year at one time (e.g. 2000).

h. Worksheet navigation buttons - use these controls to move to other pages in the worksheet. For example, if Discoverer is configured to display 25 rows at a time, clicking the next page button displays the next 25 rows from the database.

i. Worksheet Tabs - enabling you to quickly display another worksheet in the workbook. The tutorial workbook contains two worksheets: Tabular Layout and Crosstab Layout.

j. Scroll bar - use to scroll up and down data in a worksheet.

k. Worksheet subtotal and grand totals - this worksheet contains totals that aggregate data on the worksheet. Notice the sub-total for each region, and the grand total at the bottom (called Total for All Values)

l. Sheet format button - click to change how many rows are displayed on each page.

Lesson summary

Congratulations on finishing Lesson 1. In this lesson you have:

- learned how to connect to a database from Discoverer
- learned how to open a workbook from the database
- learned how to save a copy of a workbook

- learned about the main features of a workbook, such as worksheets, items, and page items

Now you are ready to find out how easy it is to create your own workbooks in Discoverer, described in "Lesson 2: Getting the data you want".

Frequently asked questions

What is the difference between a workbook and a worksheet?

Workbooks are Discoverer files that contain worksheets displaying related data retrieved from the database. If you are familiar with spreadsheet applications (e.g. Microsoft Excel), think of a workbook as a spreadsheet file.

For example, you might choose to have a workbook with separate worksheets for Sales by Region, Sales by Department, and Sales by Product; each worksheet contains sales information grouped by region, department, and product.

Worksheets contain the data that you want to analyze, together with a number of Discoverer components to help you analyze the data. If you are familiar with spreadsheet applications (e.g. Microsoft Excel), think of worksheets as different sheets in a spreadsheet file.

How do you navigate through pages of a worksheet?

If a worksheet contains more rows that can fit on one screen page, you can navigate through pages using the navigation tool bar beneath the worksheet. For example, click the right-arrow to display the next set of rows in the worksheet.

Note: Pages relating to rows on a screen page should not be confused with page items displayed in the Page Items area, which relate to different areas of data.

How do you switch between worksheets in a workbook?

If there is more than one worksheet in a workbook, click a tab located at the bottom of the workbook to switch to another worksheet. The first time you click a tab, Discoverer might ask you if you want to run the query for that worksheet, (depending on how Discoverer is configured in the Tools | Options | General tab). If you choose Yes, or if Discoverer is configured to automatically run the query, Discoverer retrieves the most current information for that worksheet from the database.

How do I create a Discoverer connection for accessing the tutorial database?

To create a new Discoverer connection, do the following:

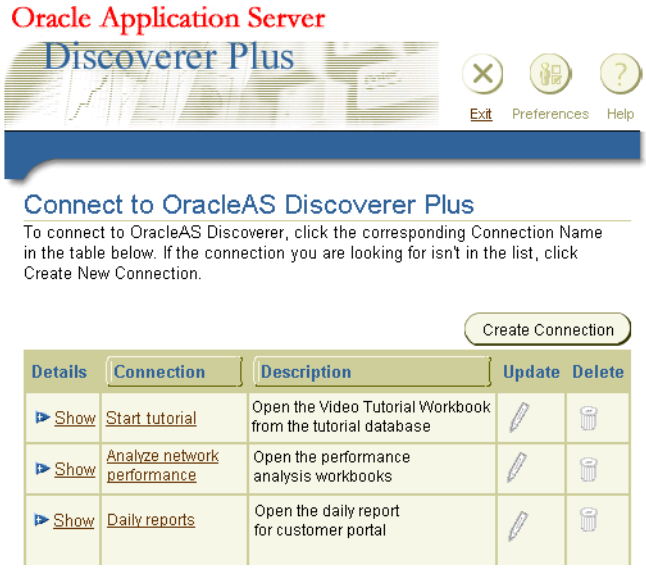
1. Launch a Web browser.
2. Go to the Discoverer Web address given to you by the Discoverer manager.

   Note: The Discoverer web site address might be:

   - the default web page that you access when you start a browser
   - a URL that you enter in the URL field in the browser
   - a link from a portal or other internet or intranet site to which you have access

   Discoverer displays the Connect to OracleAS Discoverer Plus page (see figure below).

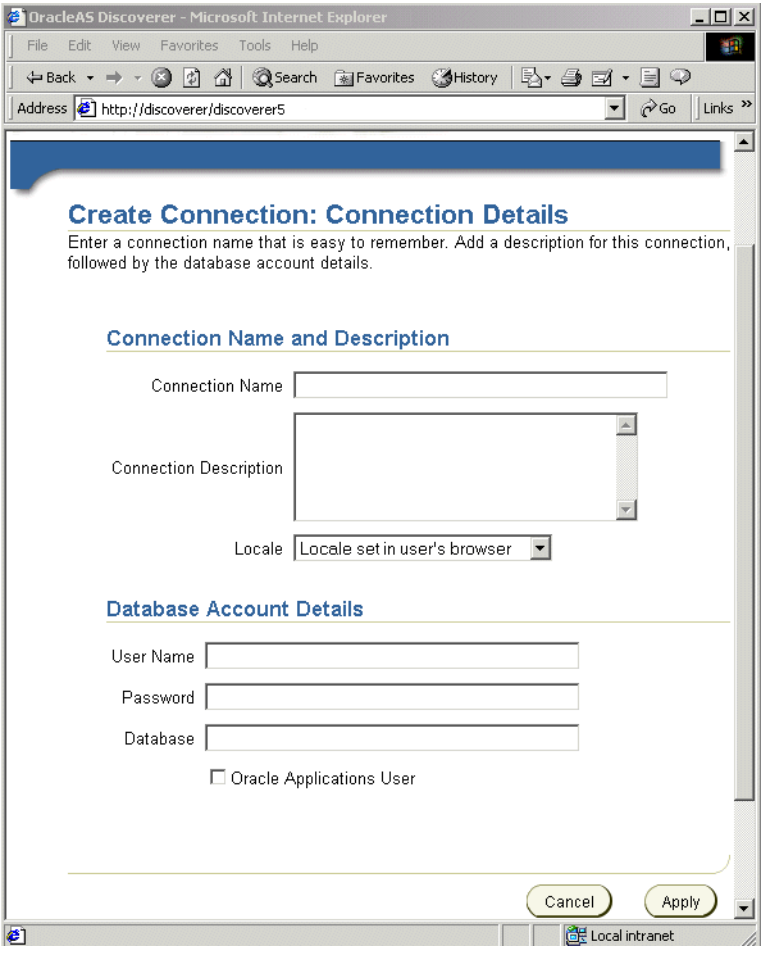
Figure 2–7 Connect to OracleAS Discoverer Plus page



   Discoverer displays a list of the existing connections in the **Connection** column.

3. Click Create Connection to display the Create Connection: Connection Details page.

Figure 2–8 Create Connection: Connection Details page



The Create Connection: Connection Details page is a web form for entering login details that you want to save in a connection.

4. Type `Start tutorial` in the **Connection Name** field.

   The connection name that you enter is displayed in the **Connections** column on the Connect to OracleAS Discoverer Plus page.

5. Type `Open the Video Tutorial Workbook from the tutorial database` in the **Connection Description** field.
6. Select the language that you want to use from the **Locale** drop down list.
7. Type `VIDEO5` in the **User Name** field.
8. Type `VIDEO5` in the **Password** field.
9. Enter the database name given to you by the Discoverer manager in the **Database** field.
10. Clear the **Oracle Applications User** check box.
11. Click Apply to save the details entered.

    If the VIDEO5 user name has access to more than one End User Layer, the Create Connection: End User Layer page is displayed.
12. If the Create Connection: End User Layer page is displayed, do the following:
    a. Select VIDEO5 from the **End User Layer** drop down list.
    b. Click Apply to save the details that you specified.

The Connect to Discoverer Plus page is displayed. The new connection that you have created is included in the list of connections.

Discoverer displays the Connect to OracleAS Discoverer Plus page. The new connection that you have created is included in the **Connections** list. Click Start tutorial to start Discoverer and connect to the tutorial database.

3

Lesson 2: Getting the data you want

Lesson 2: Getting the data you want

It will probably take you about 30 minutes to complete this lesson.

In lesson 1 you learned about the Discoverer workarea and looked at the Video Tutorial Workbook. In this lesson you will learn how to create your own workbook and use Discoverer's analysis tools to analyze worksheet data.

This lesson consists of the following exercises:

- "Exercise 1: Specifying default settings for worksheets"
- "Exercise 2: Creating a new workbook"
- "Exercise 3: Adding a worksheet title"
- "Exercise 4: Saving your workbook"
- "Exercise 5: Creating page items"
- "Exercise 6: Duplicating a table worksheet as a crosstab worksheet"
- "Exercise 7: Filtering data with conditions"
- "Exercise 8: Creating parameters for other users"
- "Exercise 9: Adding items to the worksheet"
- "Lesson summary"
- "Frequently asked questions"

Exercise 1: Specifying default settings for worksheets

In this exercise, you will learn how to specify how you want worksheet data to look by changing the Discoverer default settings. For example, worksheet font sizes,

background colors, and text alignment settings. The default settings that you specify become the default settings for new workbooks that you create.

To specify default settings:

1. Connect to the Video Store Tutorial database.

   Hint: See Lesson 1: "Exercise 1: Starting Discoverer Plus".

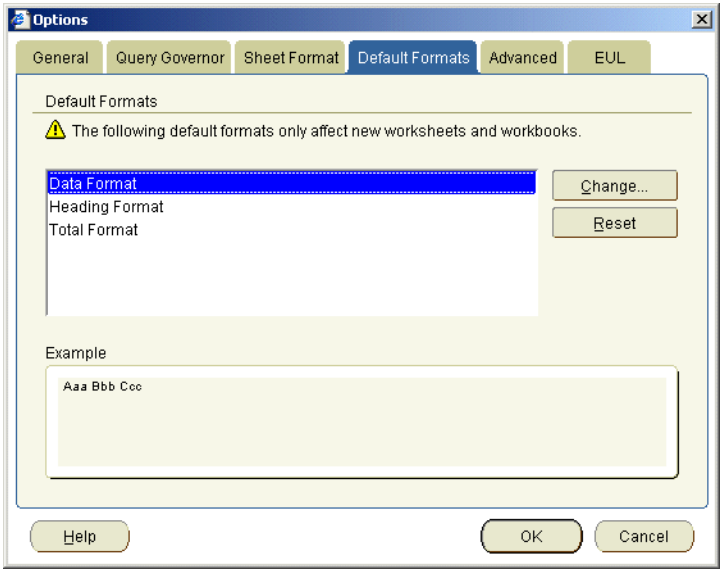
2. For now, click Cancel to close the Workbook Wizard.

3. Choose Tools | Options to display the Options dialog.

   You use the Options dialog to specify default settings for worksheets.

4. Display the Default Formats tab.

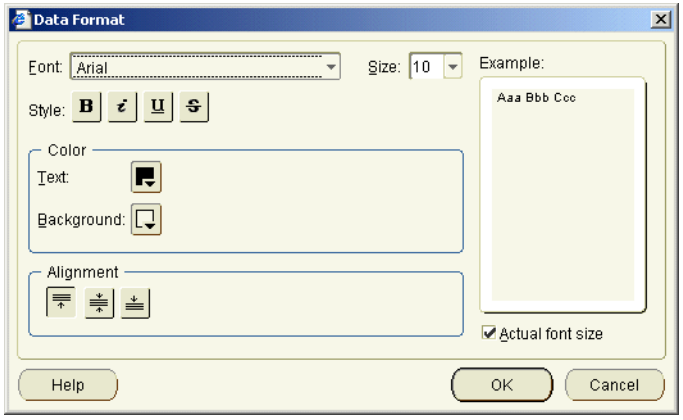
Figure 3–1 Options dialog: Default Formats tab



5. Select Data Format in the **Default Formats** list, then click Change.

   The Data Format dialog is displayed, which you use to select font styles for data in new worksheets.

Figure 3–2 Data Format dialog

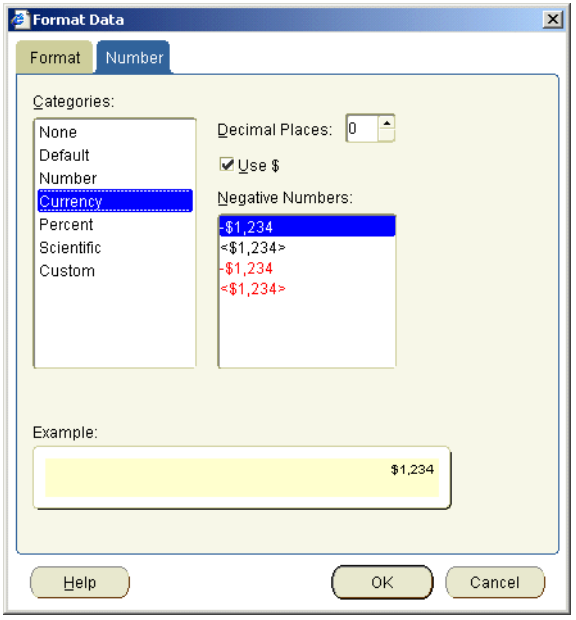


In the **Example** box, you can see an example of the current font settings. This box is updated every time you make a change.

6. Click the **Font** drop down list and select a different font style from the font options.
7. Click the 'B' button in the **Style** options and notice how the example text changes to bold.
8. Choose a font size that you like from the **Size** drop down list.
9. Choose a text color and a background color from the **Color** options.
10. When you have finished, click OK to save the details and close the Data Format dialog.
11. Click OK to close the Options dialog.

Note: You can make changes to the layout of your workbooks later, using the Edit worksheet: Format tab. For example, you might want to change the format of worksheet currency (see screenshot below).

Figure 3–3 Format data dialog: Number tab



Having specified default settings for worksheets, you are now ready to create a worksheet in a Discoverer workbook.

Exercise 2: Creating a new workbook

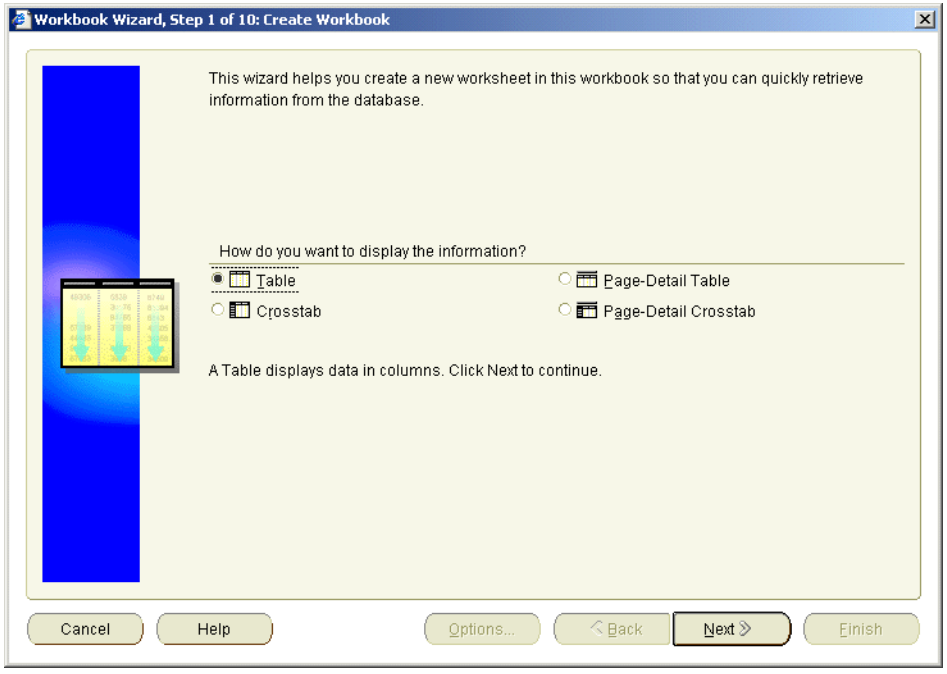
In this exercise you will put aside the tutorial workbook Video Tutorial Workbook, and create our own workbook.

Using Discoverer's Workbook Wizard, you will select items from the video store database that you want to display in your workbook.

To create a new workbook:

1. Choose File | New to display the Workbook Wizard: Create Workbook dialog.

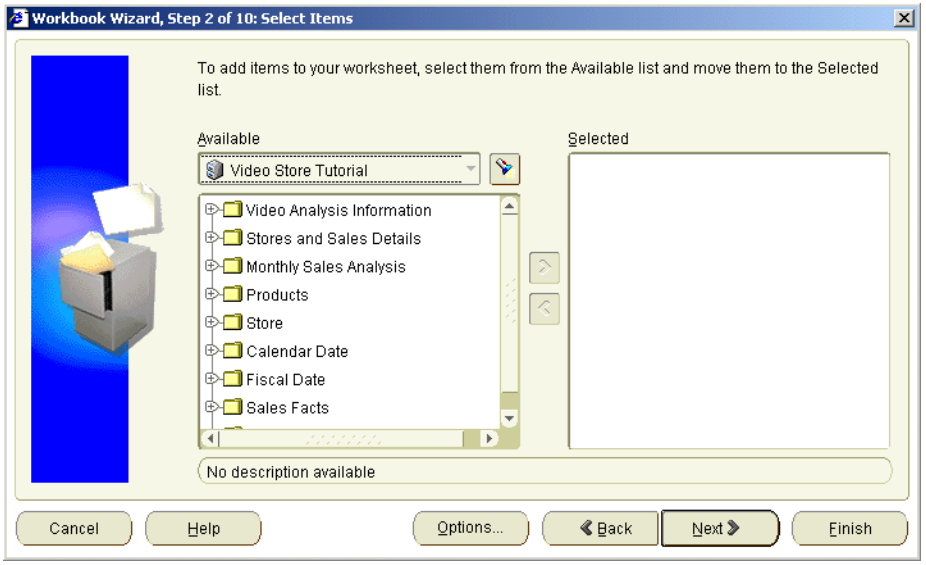
Figure 3–4 Workbook Wizard: Create Workbook dialog



The Worksheet Wizard: Create Workbook dialog enables you to specify a worksheet style. The easiest way to display data is in a table. A table displays data in columns with column headings.

2. Select the Table radio button to select the table layout.
3. Click Next to display the Workbook Wizard: Select Items dialog.

Figure 3–5 Workbook Wizard: Select Items dialog



The Workbook Wizard: Select Items dialog enables you to specify what data you want in your report.

4. Choose Video Store Tutorial from the **Available** drop down list.

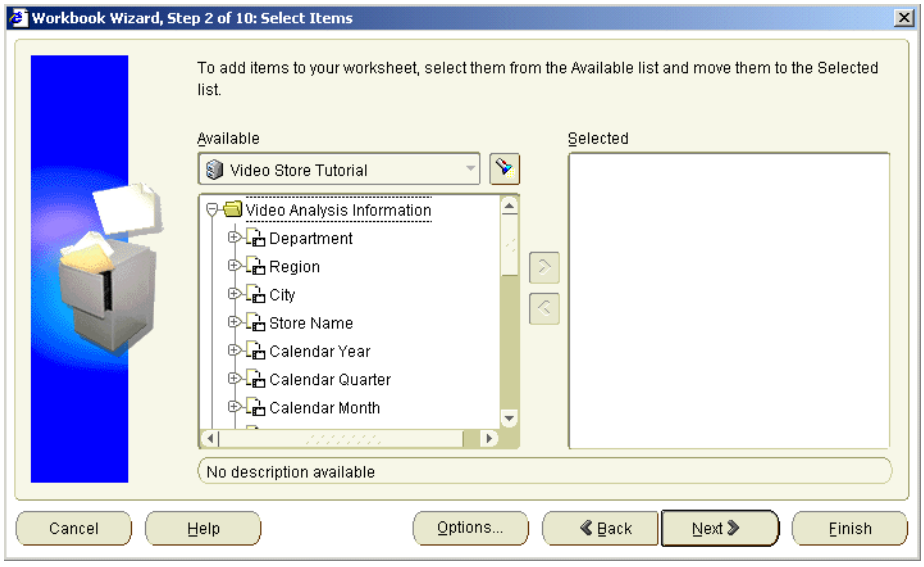
   The options that you see in the Available drop down list are different parts of your organization's database that the Discoverer manager has defined for you. These parts of your organization's database are called business areas.

   Business areas contain data for a specific area of interest. For example, an Accounts Payable business area, a Sales business area, and an Operations business area.

   The item navigator box below the **Available** list displays folders and items in the Video Store Tutorial business area.

5. In the item navigator box, click the + symbol next to the Video Analysis Information folder to expand the folder.

Figure 3–6 Workbook Wizard: Select Items dialog showing Video Analysis Information folder



The Video Analysis Information folder expands to show a list of items contained in this folder. For example, the first item in the list, Department, contains data about the departments in the video stores.

Hint: Click the + and – symbols to expand and collapse folders and items.

6. Move the Department item from the **Available** list to the **Selected** list.

   Hint: To add an Item, you can either drag-and-drop it to the **Selected** list, or click the right arrow button.

7. Click the + symbol next to the Region item to expand the item.

   Notice that there are three regions: Central, East, and West. You can select regions individually, or select all regions available.

8. Move the Region item from the **Available** list to the **Selected** list.

   Notice that you have selected all three regions.

9. In the **Available** list, click the + symbol next to the Profit item so that Profit expands to show a list of additional items.

10. Move the Profit SUM item from the **Available** list to the **Selected** list.

    For numeric data like sales, costs, and profits, Discoverer provides you with a choice of pre-defined aggregations (e.g. sum, average, minimum). For example, if you want to know the total profit for a particular region, select SUM. If you want to know the average profit for the same region, select AVG.

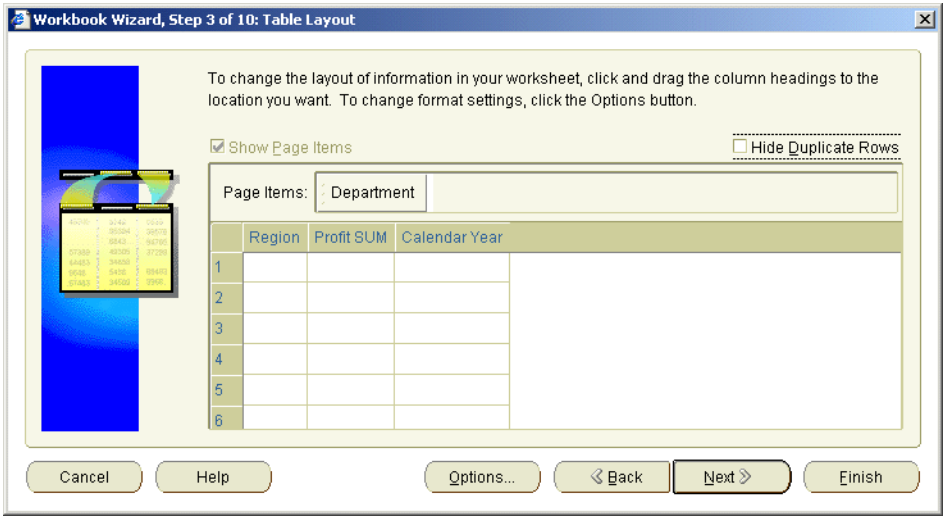
11. Move the Calendar Year item from the **Available** list to the **Selected** list.

    You should now have the following items in the **Selected** list:

    - Department
    - Region
    - Calendar Year
    - Profit SUM

12. Click Next to display the Workbook Wizard, Step 3 of 10: Table Layout dialog.

Figure 3–7 Workbook Wizard: Table Layout dialog



You can see that Department is in the Page Items area. Region, Profit SUM, and Calendar Year are in the body of the worksheet.

Here, you want to re-order the items to display the Calendar Year item to the left of the Region item.

13. Drag and drop the Calendar Year item to the left of the Region item.

A black bar between the columns indicates where the item will be positioned when you release the cursor.

Figure 3–8 Re-ordering worksheet items

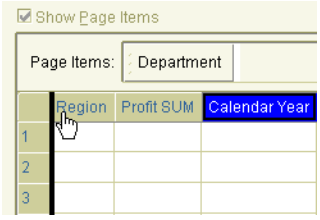
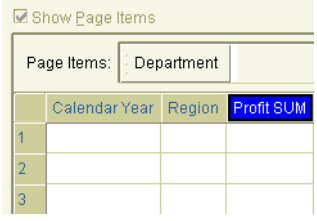


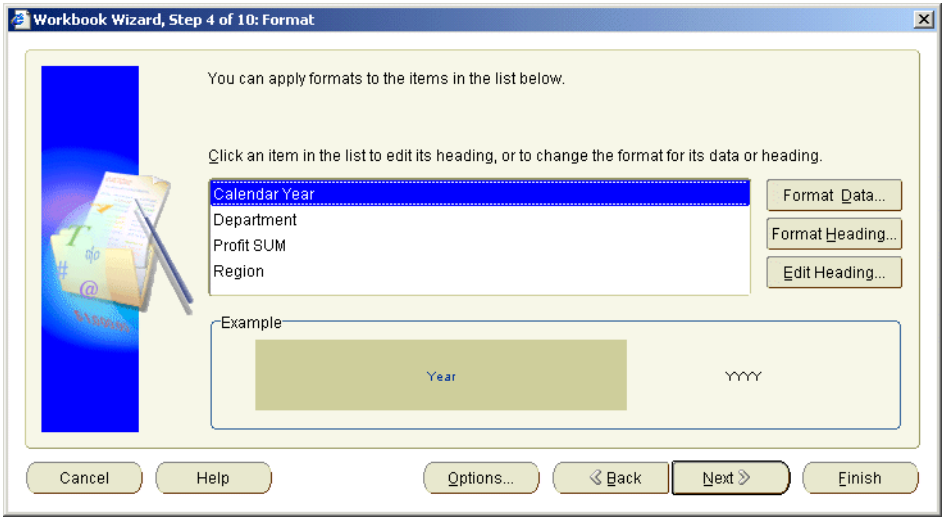
Figure 3–9 Reordered worksheet items



14. Click Next to display the Worksheet Wizard, Step 4 of 10: Format dialog.

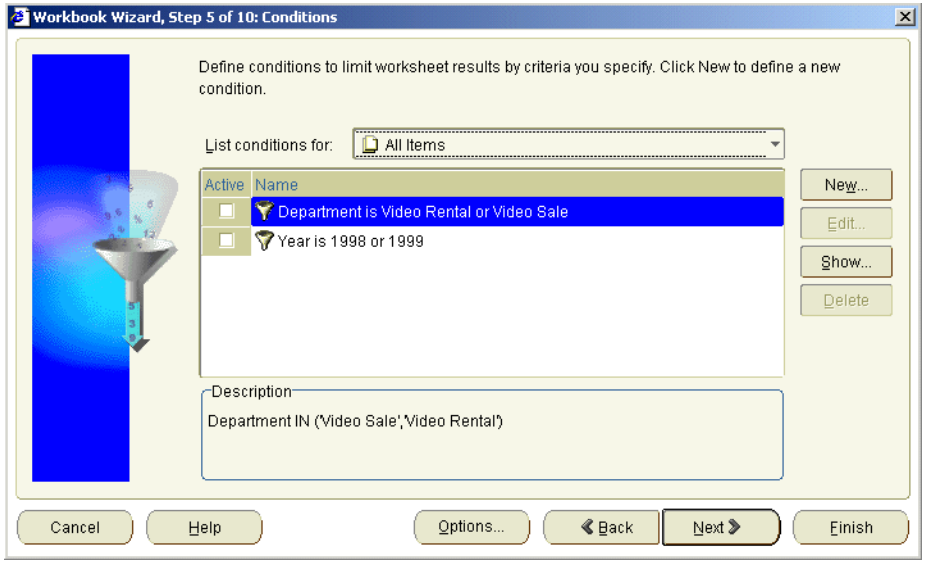
Because you specified default settings earlier, you will leave the format unchanged.

Figure 3–10 Workbook Wizard: Format dialog



15. Click Next to display the Worksheet Wizard, Step 5 of 10: Conditions dialog.

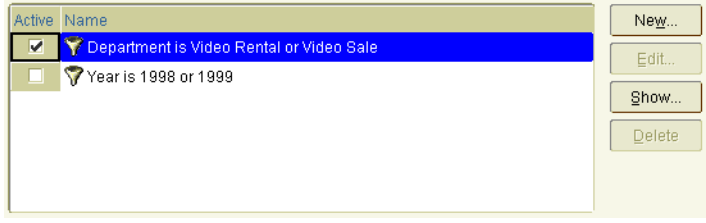
Figure 3–11 Conditions dialog



You want to display only data from the Video Rental or Video Sale departments on the new worksheet.

16. Select the **Department is Video Rental or Video Sale** check box.

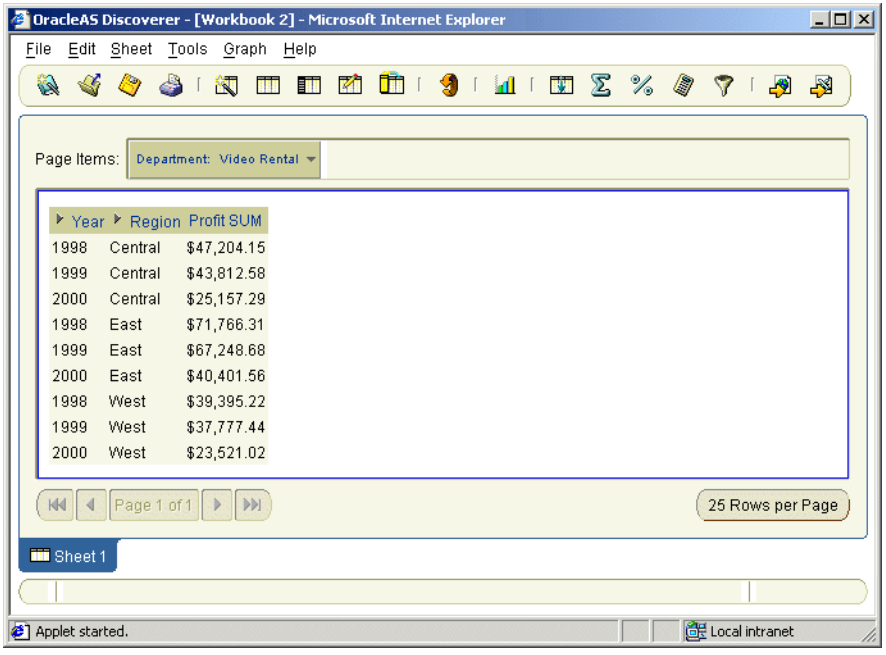
Figure 3–12 Conditions list



17. Click Finish to close the Workbook Wizard.

A new worksheet is displayed, called Sheet 1. Sheet 1 contains the data for the items you selected. Notice that the item layout matches the layout that you specified in the Workbook Wizard.

Figure 3–13 Sheet 1 worksheet



Having created a worksheet in Discoverer, you are now ready to add a worksheet title, then save the workbook in the database.

Exercise 3: Adding a worksheet title

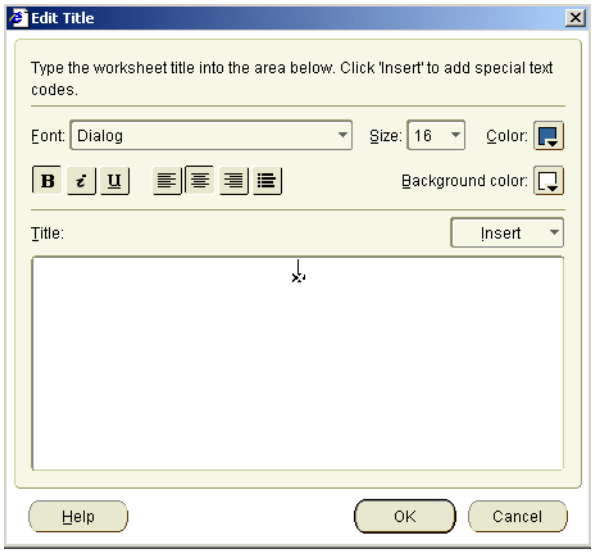
In this exercise you will learn how to add text and text variables to a worksheet title.

Hint: Text variables are pre-defined variables that you can add to worksheet titles, which are updated at runtime (e.g. current date and current time).

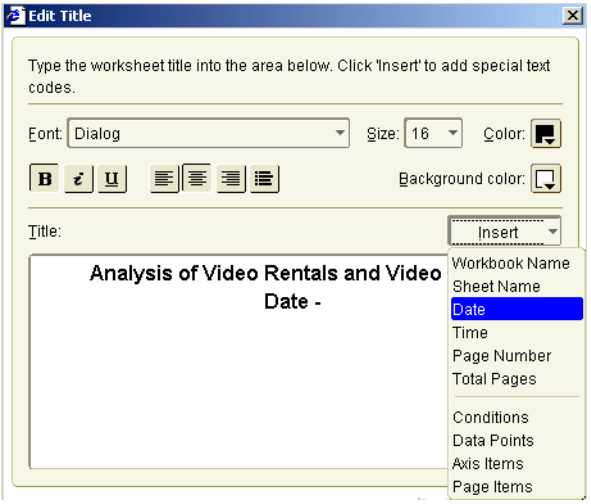
Worksheet titles enable you to add useful information to the top of worksheets (e.g. report name, current date, current time). For example, you might want to display a report name and the current date when you print or export a worksheet.

To change the worksheet title:

1. Choose Sheet | Edit Title to display the Edit Title dialog.

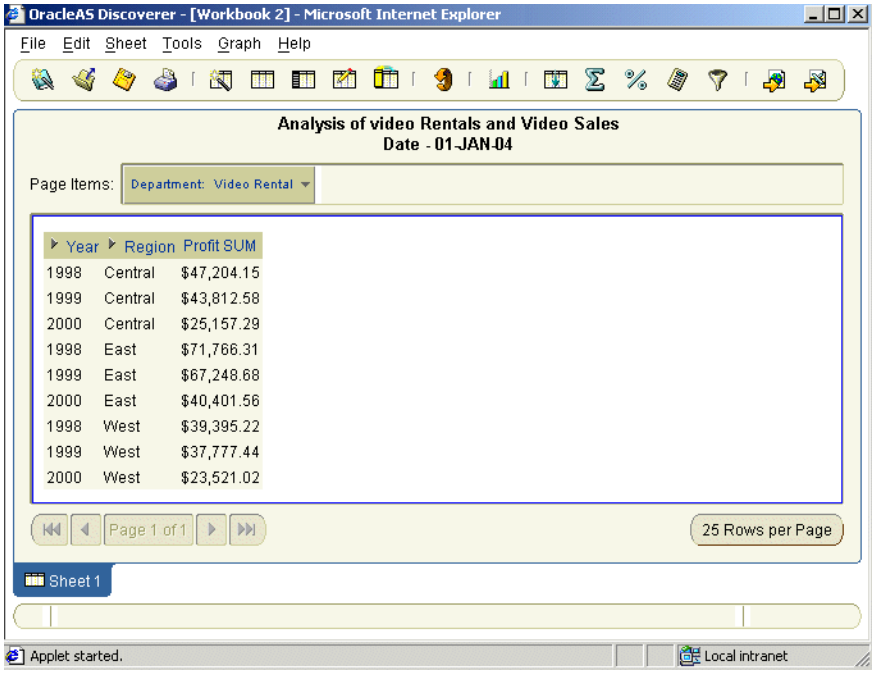


2. Click the **Color** button and select a black color from the drop down color pane.
3. Click inside the **Title** field and type `Analysis of Video Rentals and Video Sales`.
4. Press [Enter] then type `Date -`.
5. Click Insert to display a drop down list of text variables, then choose Date.



Notice that Discoverer inserts &Date into the **Title** field. &Date is a text variable that displays the current date in the worksheet title.

6. Click OK to save the worksheet title and display the worksheet.



You will see the worksheet title displayed at the top of the worksheet. Notice that Discoverer inserts the current date into the worksheet title (i.e. 01-JAN-04). The date is refreshed every time the worksheet is opened. In other words, when an end user opens, prints, or exports the report, the runtime date is displayed.

Hint: To edit a worksheet title, choose Sheet | Edit title or double click the worksheet title to display the Edit Title dialog.

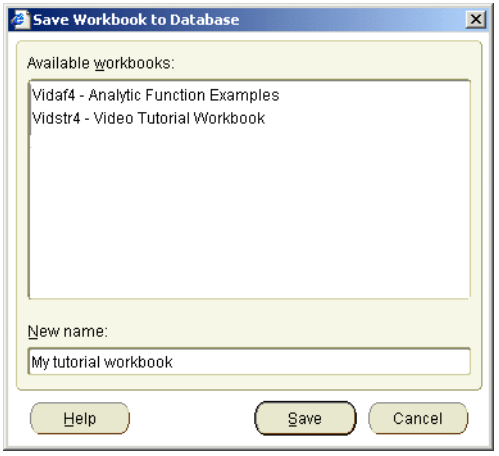
Exercise 4: Saving your workbook

In this exercise you will learn how to save workbooks in the database.

Note: The Discoverer manager must grant you the privilege to save workbooks in the database.

1. Choose File | Save As to display the Save workbook to Database dialog.

Figure 3–14 Save Workbook to Database dialog



2. Enter a name for the new workbook in the **New name** field.

   For example, 'My tutorial workbook'.

3. Click Save to save the details and close the Save Workbook to Database dialog.

Having saved your workbook, you are now ready to begin customizing the workbook for easier analysis.

Exercise 5: Creating page items

In this exercise you will learn how to create a page item using Discoverer's pivoting capabilities to make your worksheet easier to analyze.

In your worksheet, the Department item is displayed in the Page Items area. This means that the worksheet displays data for one department at a time. You want to display data for one region at a time, so that you can analyze data for all departments in particular regions.

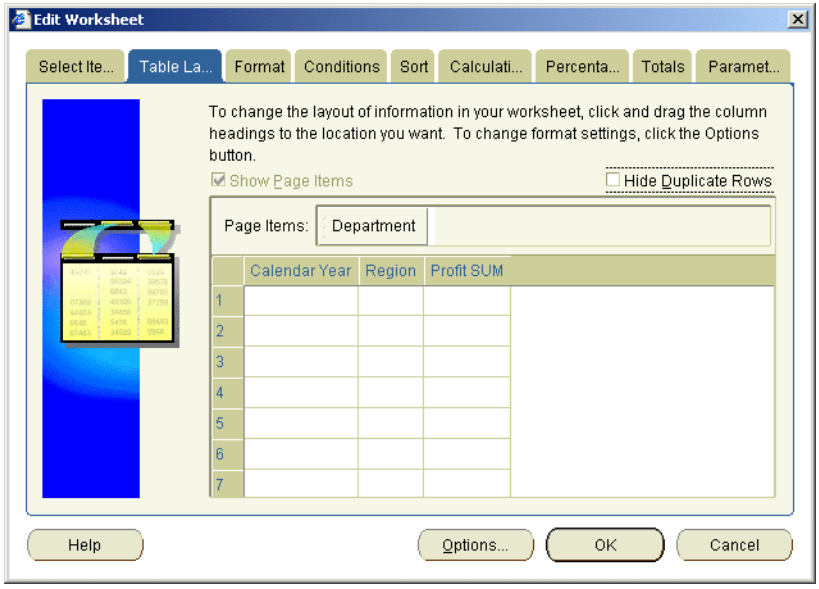
To create a page item:

1. Choose Sheet | Edit Sheet to display Edit worksheet dialog.

   Notice that the tabs on the Edit worksheet dialog match the pages on the Workbook Wizard. This enables you to go back to any aspect of a worksheet and change something.

2. Display the Table Layout tab.

Figure 3–15 Edit Worksheet: Table Layout tab

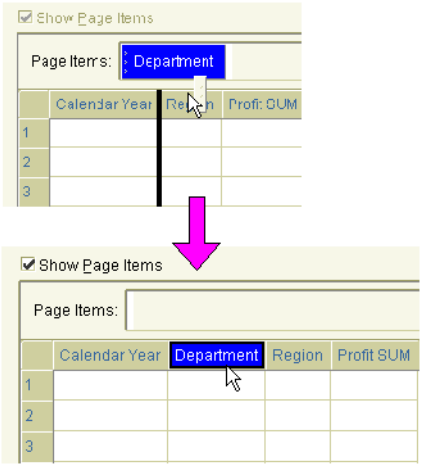


The Edit Worksheet: Table Layout tab enables you to create page items, and re-arrange worksheet items. If you rearrange worksheet items, you do not affect the data itself.

Notice that the **Show Page Items** check box is selected, which means that the area is active.

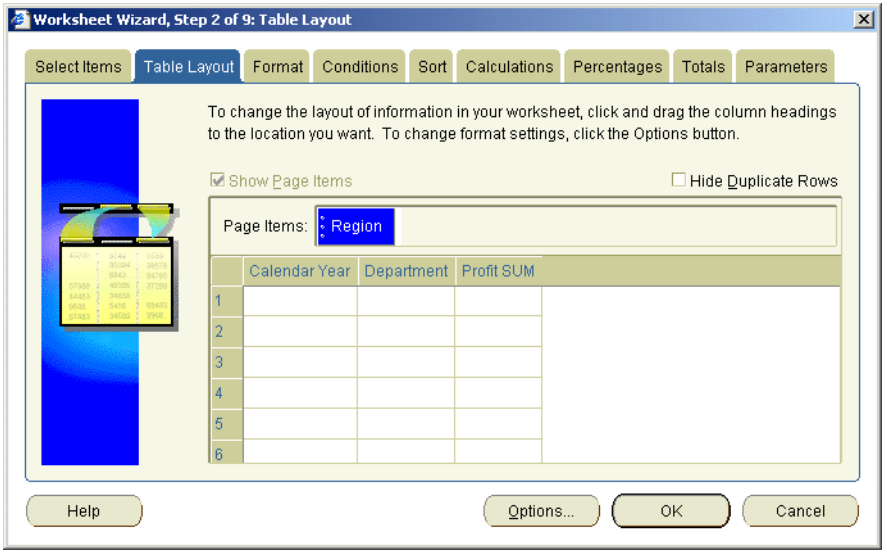
3. Drag the Department item down into the main body of the table to the right of the Calendar Year item.

Figure 3–16 Moving the Department item from the Page Items area to the body of the worksheet



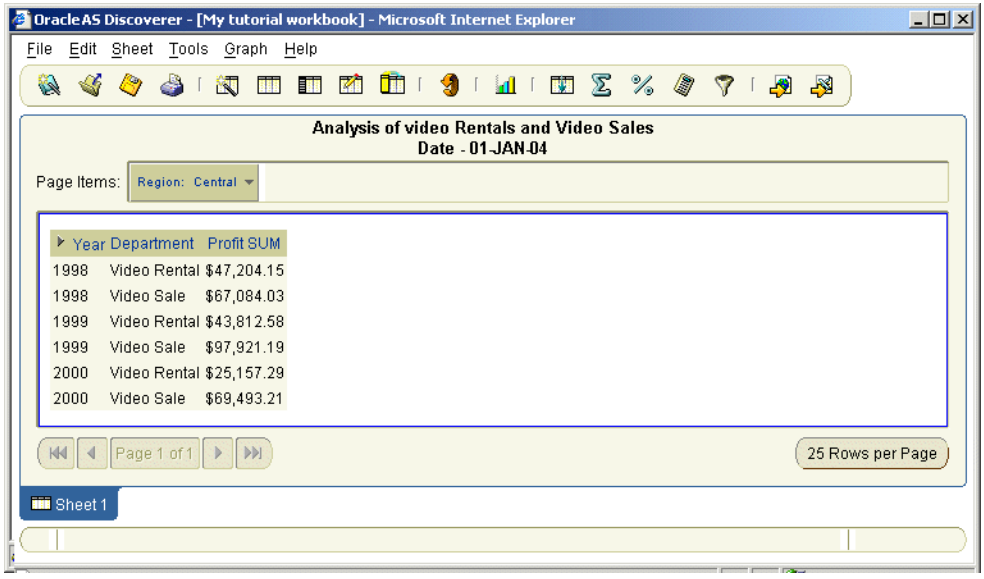
4. Drag the Region item into the Page Items area next the Department item.

Figure 3–17 The Worksheet layout tab



5. Click OK to save the details and close the Edit Worksheet dialog.

Figure 3–18 Worksheet with Region displayed in the Page Items area



Notice that the Region item is displayed in the Page Items area. The Department Item is now displayed between the Year and Profit SUM columns.

6. Select the East region from the **Region** drop down list.

   Notice how the worksheet is refreshed to display data for the East region.

7. Choose File | Save to your work.

Having rearranged your worksheet for easier analysis, you are now ready to create a crosstab worksheet to enable more advanced analysis.

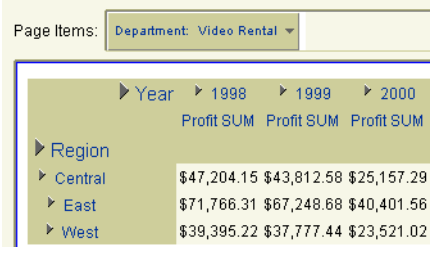
Exercise 6: Duplicating a table worksheet as a crosstab worksheet

In this exercise you will learn how to quickly create a new worksheet based on an existing worksheet.

Here, you get a new worksheet containing the same items as in the table worksheet, but in crosstab format. A crosstab relates two sets of data and then summarizes their interrelationship in terms of a third set of data.

For example, you might want to analyze the annual profit for each region, organized by department. By duplicating your table as a crosstab, Discoverer calculates the annual profit for each region, as shown below.

Figure 3–19 Crosstab worksheet example



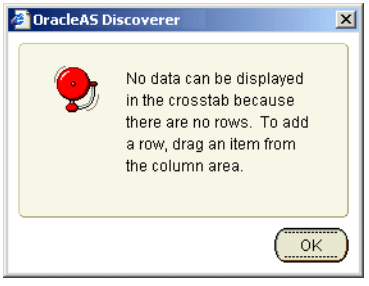
Notice that the Region item is now positioned on the left axis, with regions displayed on the left hand side as row headings.

To duplicate the table worksheet as a crosstab worksheet:

1. Choose Sheet | Duplicate as Crosstab.

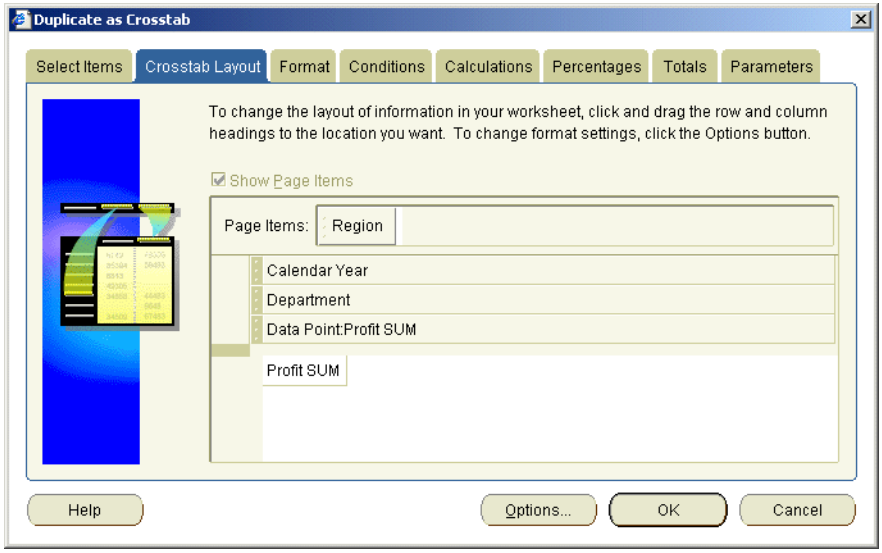
   Discoverer displays an alert dialog to let you know that you must have rows defined in a crosstab. Rows on crosstabs are left axis items.

Figure 3–20 Discoverer alert dialog



2. Click OK to display the Edit Worksheet: Crosstab Layout tab.

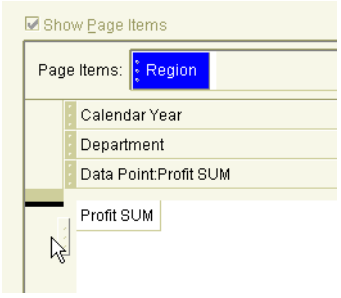
Figure 3–21 Duplicate as Crosstab dialog: Crosstab Layout tab



The Crosstab Layout tab displays the default worksheet layout. Notice that there are three items on the top axis (Calendar Year, Department, and Data Point:Profit SUM), but that there a now items on the left axis. Remember that on a crosstab worksheet you need to have items on both the top axis and left axis.

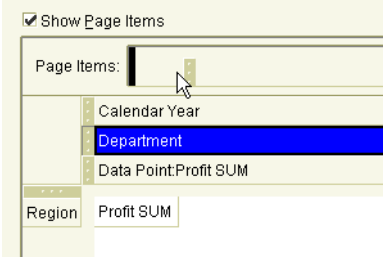
3. Drag the Region item from the Page Items area to the left axis.

Figure 3–22 Dragging the Region item from the Page Items area to the left axis



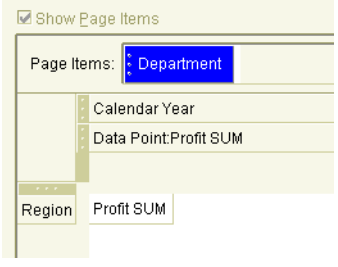
4. Drag the Department item to the Page items area.

Figure 3–23 Dragging the Department item to the Page Items area



The Department item should now be positioned in the Page Items area, and the Region item should be positioned on the left axis (see figure below).

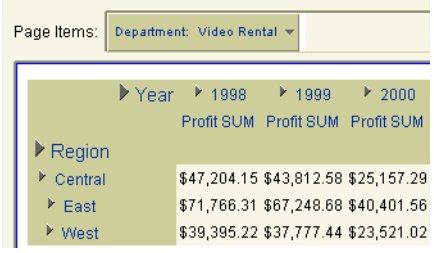
Figure 3–24 Worksheet layout after items have been positioned



5. Click OK to save the details and close the Edit Worksheet: Crosstab Layout tab.

   When Discoverer displays the new worksheet, notice that the crosstab is organized by Region on the left axis, and Year on the top axis.

Figure 3–25 Rearranged worksheet



Having learned how to change the layout of worksheets, and create table and crosstab worksheets, you are now ready to learn how to filter worksheet data using conditions.

Exercise 7: Filtering data with conditions

In this exercise you will learn how to use worksheet conditions to display only data that you want to analyze.

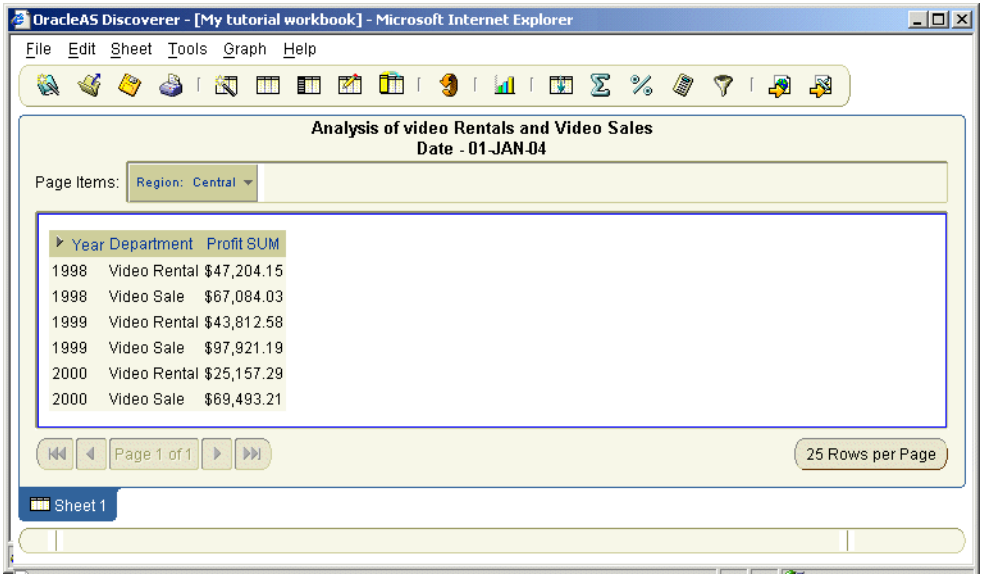
Some video stores show larger profits than others. What factors cause some stores to earn more profit than others? If you are getting data from a very large database, the amount of data you get could be so large that you would have difficulty finding the answer to that question. If you are interested in analyzing only the stores with the highest profits, how could you reduce the amount of data you get from the database? For example, you might ask 'Which stores have annual profits greater than $50,000?'.

Discoverer provides you with worksheet items called conditions to reduce the amount of data you get from the database. Conditions enable you to focus on data that you are interested in and ignore data that you are not interested in.

To filter data with conditions:

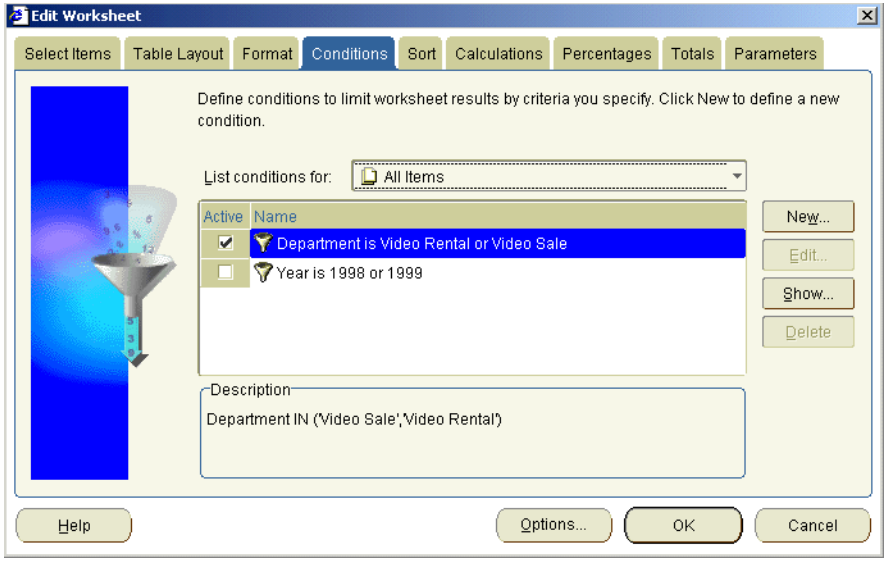
1. Display the Sheet 1 worksheet.

Figure 3–26 Sheet 1 worksheet



2. Choose Tools | Conditions to display the Edit worksheet dialog.
3. Display the Conditions tab.

Figure 3–27 Edit Worksheet dialog: Conditions tab

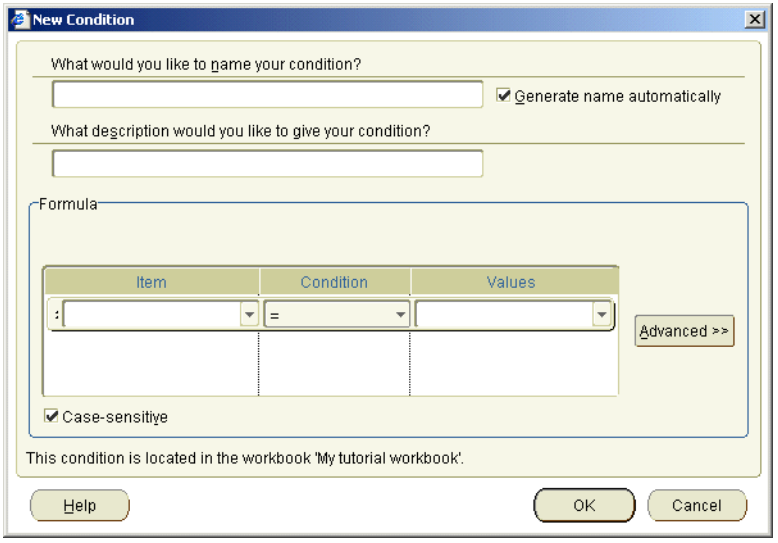


Notice that two conditions already exist. They were created for you by the Discoverer manager.

You want to limit the data to only Regions with annual profit greater than 50,000 dollars. To do this, you create a new condition.

4. Click New to display the New Condition dialog.

Figure 3–28 New Condition dialog



5. If the **Generate name automatically** check box is not selected, select this check box.

   Discoverer creates a condition name for you.

6. Type `Departments with annual profits greater than $50,000` in the **What description would you like to give your condition?** field.

   This description is displayed in the Conditions tab, and helps other Discoverer users understand what the condition does.

   Look at the **Formula** box. This is where you build the condition. Discoverer displays any data that matches the condition criteria and ignores data that does not match the condition criteria.

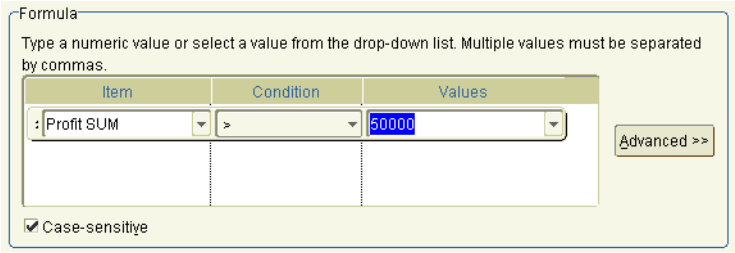
   In this example, you want to display only data about regions with profits greater than 50,000 dollars.

7. In the **Item** field, select Video Analysis Information.Profit SUM.

8. In the Condition field, select the 'greater than' symbol [>].

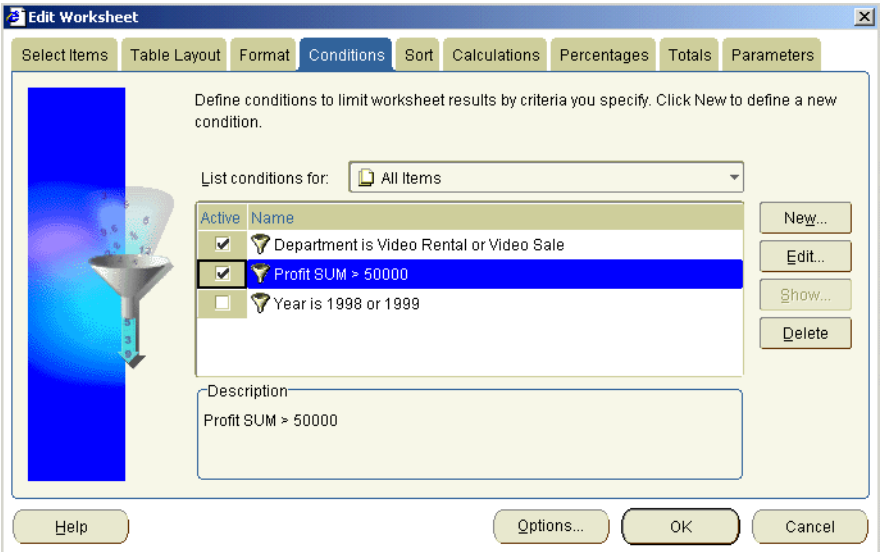
9. In the **Value** field, enter 50000.

Figure 3–29 The Formula box with the condition details entered



10. Click OK to save the details and return to the Conditions tab.

Figure 3–30 Edit Worksheet dialog: Conditions tab

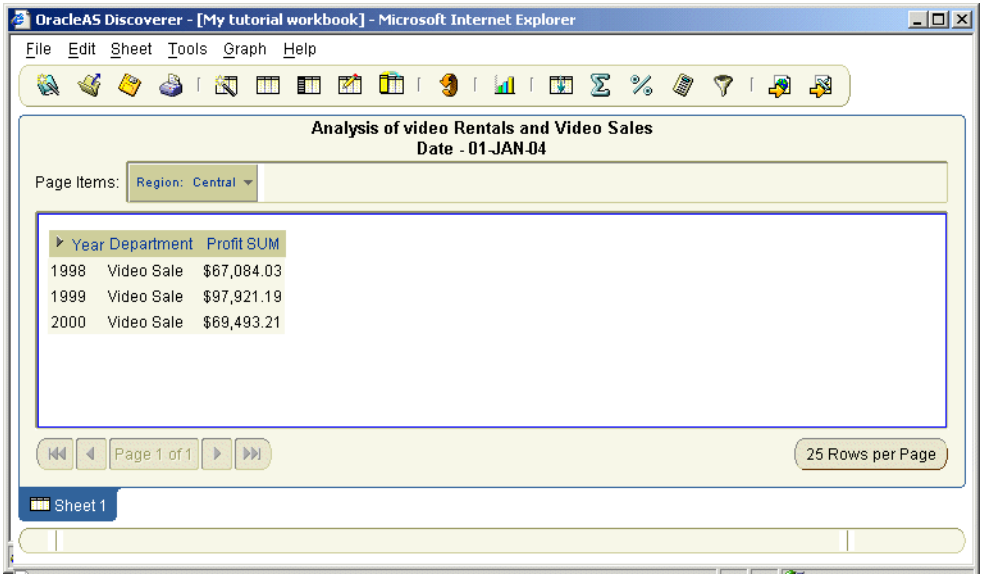


Notice the name of your new condition: Profit SUM > 50000. This is the condition name that Discoverer generated automatically for you. The **Description** box below contains the additional information that you entered when you created the condition. Notice that the new condition is selected by default. If you want to turn off the condition, clear this check box.

11. Click OK to close the Conditions tab and display the worksheet.

Discoverer sends a new query to the database and shows you the new results in the worksheet. Notice that you now have less data. Only departments with annual profits greater than 50,000 dollars are shown.

Figure 3–31 Worksheet with Profit SUM > 50000 condition applied



As you can see, in the Central region, only the Video Sale department generated profits in excess of $50,000 (in 1998, 1999, and 2000). You could now print a report of this data or mail it as a HTML file.

Having produced a report, you now want to turn off the condition 'Profit SUM > 50000' in order to display all of the data once more. To do this, you turn off the condition 'Profit SUM > 50000' that you have just created. You can always turn it back on again later if required. Alternatively, you could delete the new condition permanently.

12. Choose Tools | Conditions to display the Edit worksheet dialog

13. Clear the check box next to the condition 'Profit SUM > 50000'.

14. Click OK to return to the worksheet.

Notice how you can see all of the data, not just those regions with profits greater than $50,000.

Having learnt how to filter data in a worksheet, you are now ready to learn how to apply dynamic user input to worksheets using parameter items.

Exercise 8: Creating parameters for other users

In this exercise you will learn how to create worksheet parameters to provide dynamic input to conditions. Worksheet parameters enable you to prompt worksheet users to enter a value that is used in a condition or calculation.

Sometimes you might want other Discoverer uses to open your workbook, but only to look at specific areas of data. For example, users might typically want to look at only data for a particular month, such as January or February.

You will create a new parameter that asks worksheet users which year they want to analyze. Every time the workbook is opened or refreshed, Discoverer will prompt worksheet users to specify which year they want to analyze.

Hint: Before you start this exercise, make sure that you have turned off the condition Profit SUM > 50000 (choose Choose Tools | Conditions to display the Conditions dialog, and clear the check box in the **Active** column next to the 'Profit SUM > 50000' condition). For more information about using conditions, see "Exercise 7: Filtering data with conditions".

To create a parameter:

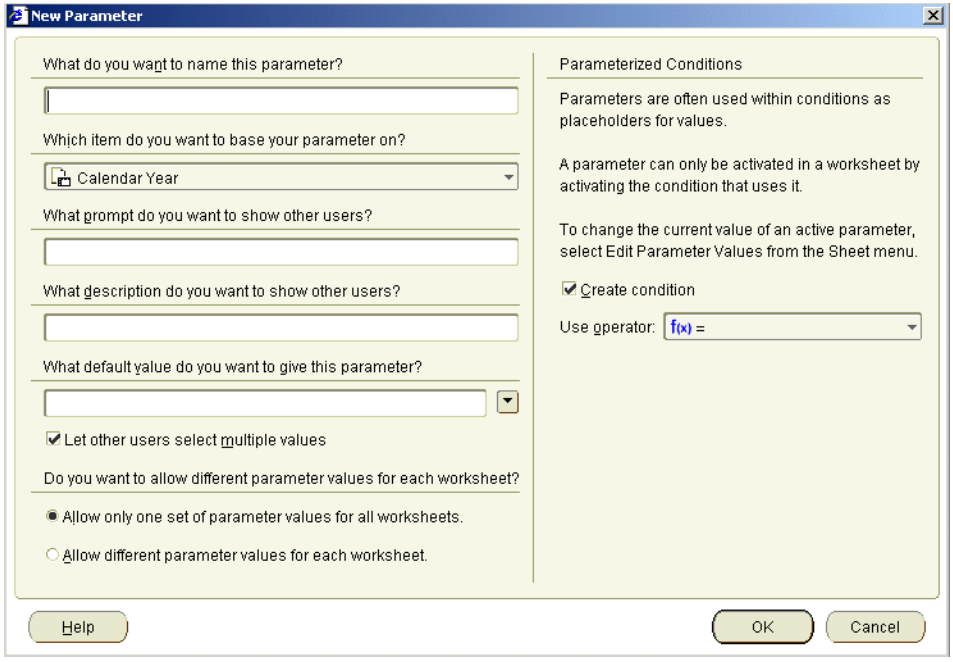
1. Choose Tools | Parameters to display the Edit worksheet dialog.
2. Display the Parameters tab.

   The Parameters tab lists existing parameters available to the workbook.

Figure 3–32 Edit Worksheet dialog: Parameters tab

3. Click New to display the New Parameter dialog.

Figure 3–33 New Parameter dialog



4. In the **What do you want to name this parameter?** field, enter 'Choose a Year'.
5. In the **Which Item do you want to base this parameter on?** field, select Video Analysis Information.Calendar Year.
6. In the **What prompt do you want to show other users?** field, enter 'Please select which year(s) you want to analyze'.

   This prompt will be displayed whenever the worksheet is opened or refreshed.
7. In the **What description do you want to show other users?** field, type 'Restrict the workbook to one or more years'.

   This description will is displayed whenever the worksheet is opened or refreshed to help worksheet users understand what values to select.
8. Click the **What default value do you want to give this parameter?** drop down list and select 2000.

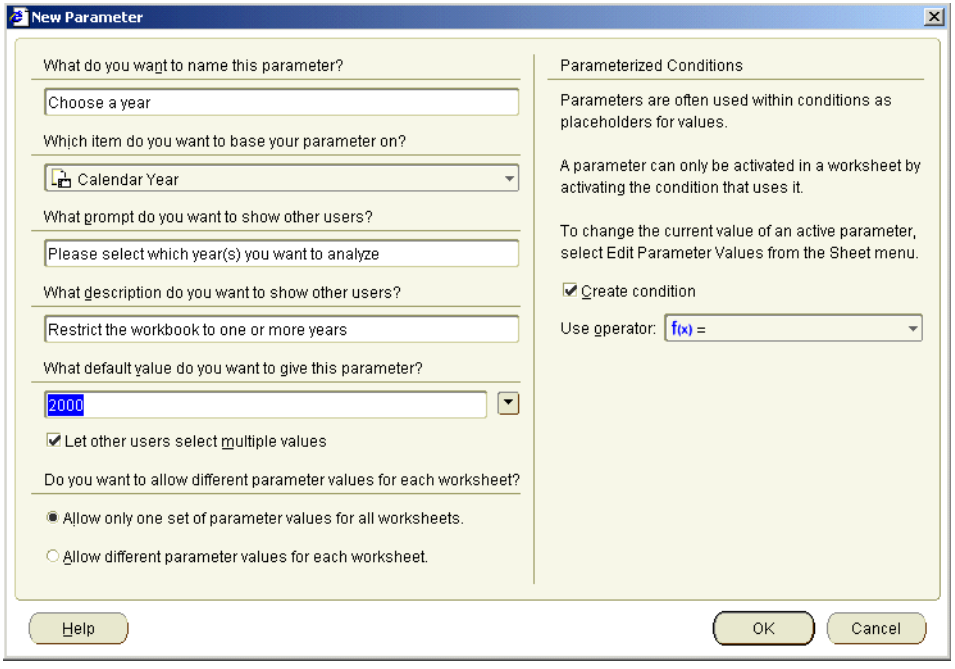
This default parameter value will be selected whenever the worksheet is opened or refreshed. This value is typically the most commonly selected value or the first value used (e.g. January in a series of months).

9. Select the **Let users select multiple values** check box.

   Selecting the **Let users select multiple values** check box enables you to display data relating to more than one value. For example, you might select January, February, and March to analyze data for all three months, rather than just for January.

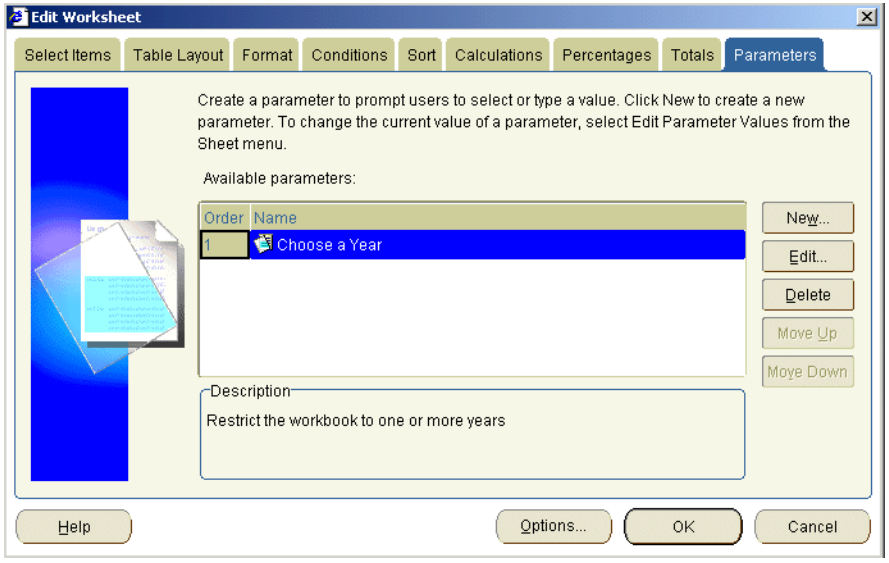
10. Leave the other default values unchanged (see figure below).

Figure 3–34 The New Parameter dialog with the values selected



11. Click OK to return to the Parameters tab.

Figure 3–35 Edit Worksheet dialog: Parameter tab

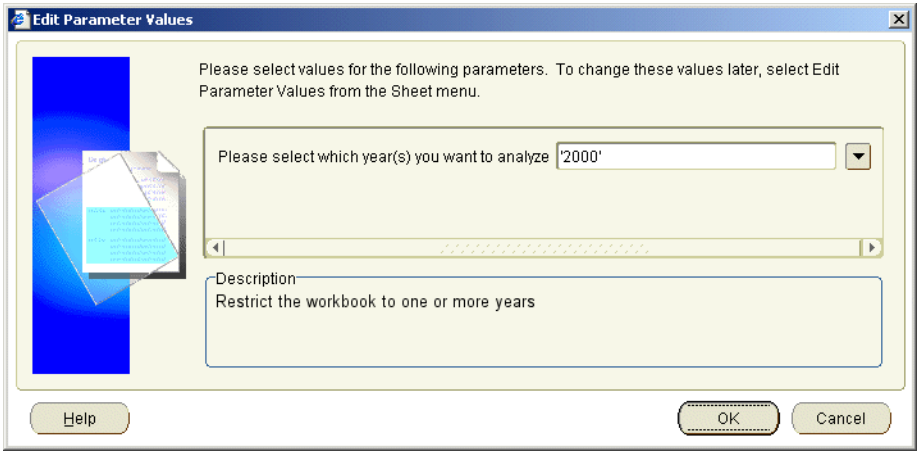


Notice that your new parameter, called Choose a Year, is displayed turned on by default (i.e. its check box is selected). Look at the Description box at the bottom. The description that you entered is displayed (i.e. 'Restrict the workbook to one or more Years').

12. Click OK to close the Parameters tab and return to the worksheet.

Because the new parameter is turned on, the Edit Parameter Values dialog is displayed and displays the prompt 'Please select which year(s) you want to analyze'.

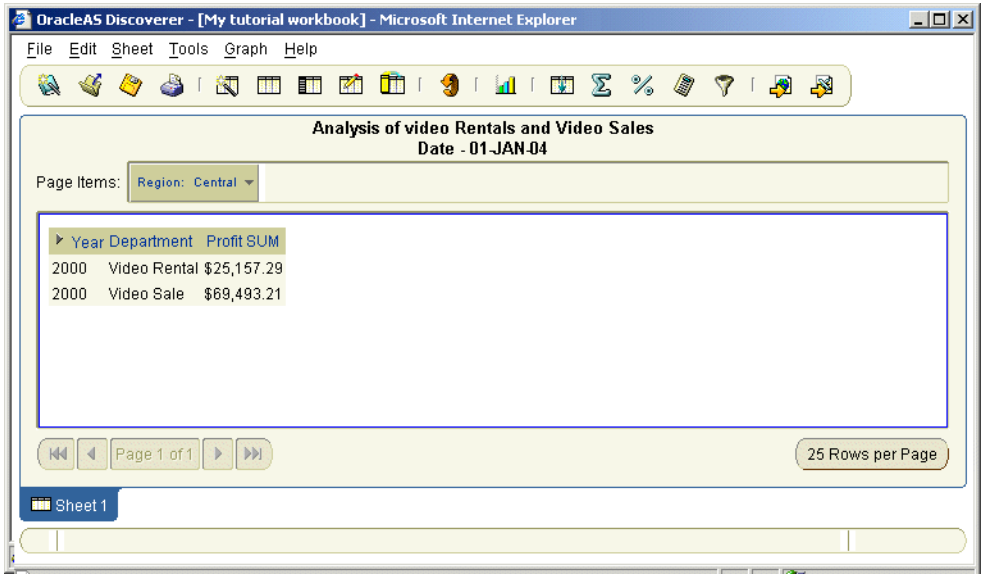
Figure 3–36 Edit Parameter Values dialog



13. Leave the default value (2000) unchanged and click OK.

Discoverer refreshes the worksheet. Only data for the year 2000 is displayed.

Figure 3–37 Sheet 1 worksheet with parameter applied



Because you selected the **Create condition** check box when you created the parameter, you can turn this parameter value on and off using the Conditions dialog.

14. To turn this parameter off, choose Tools | Conditions to display the Conditions tab, then clear the Calendar Year = :Choose a Year check box.
15. Click OK to display the worksheet.

    Note: Notice that in the condition, the **Choose a Year** argument is prefixed with a colon ':'. The colon indicates that the value is dynamically set by a parameter. In other words, the colon indicates that the value can change every time the worksheet is opened or refreshed when the parameter value is updated.

Exercise 9: Adding items to the worksheet

In this exercise you will learn how to add new data items to the worksheet to enable you to analyze new data.

Now that you have begun to organize your data for analysis, you realize that you need more information in your report. You know the profit for each region, but you

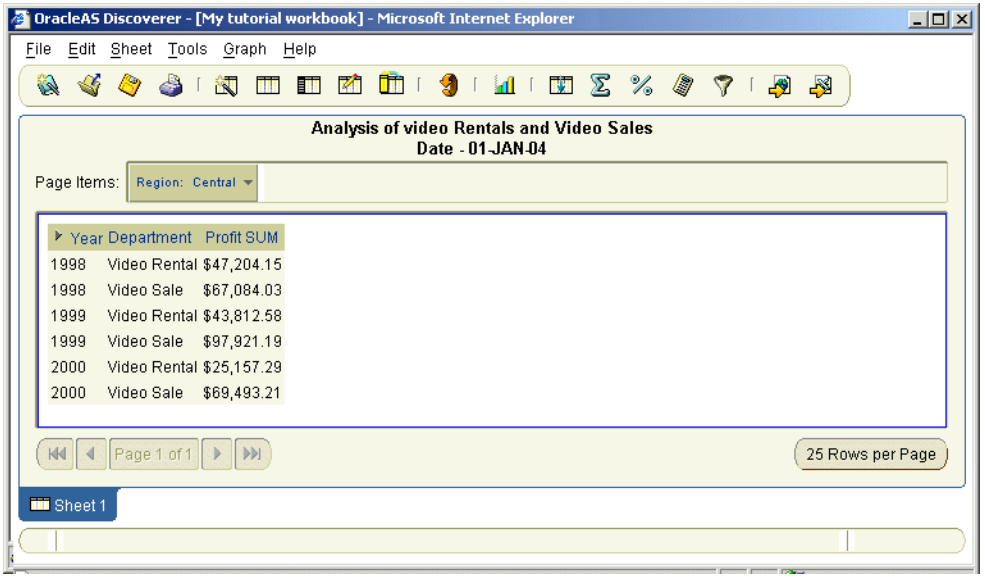
would also like to compare the profit with sales amounts. You therefore need to add the Sales item to the worksheet.

To add an item to the worksheet:

1. Display the tabular worksheet by clicking the Sheet 1 tab at the bottom of the workbook.

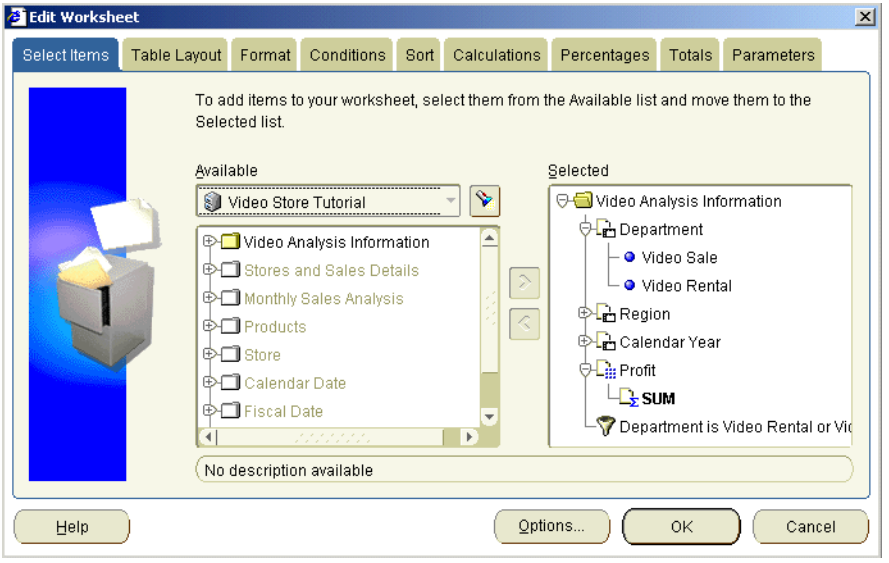
   Hint: Before you start this exercise, make sure that you have turned off the Choose a Year parameter (choose Choose Tools | Conditions to display the Conditions dialog, and clear the check box in the **Active** column next to the 'Calendar Year = :Choose a Year' condition). For more information about using parameters, see "Exercise 8: Creating parameters for other users".

Figure 3–38 Sheet 1 worksheet



2. Choose Sheet | Edit Sheet to display the Edit worksheet dialog at the Select items tab.

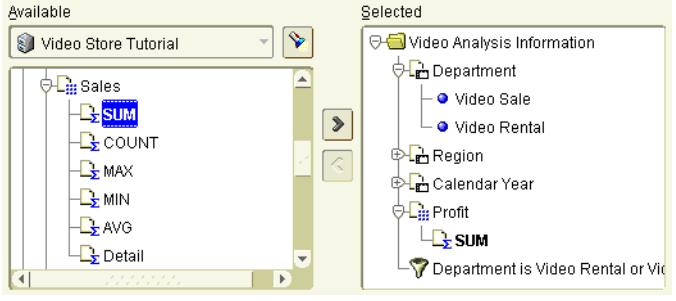
Figure 3–39 Select Items tab



3. In the **Available** list, click the [+] next to the Video Analysis Information folder to expand the folder.

4. From the list of items, move the Sales SUM item from the **Available** list to the **Selected** list.

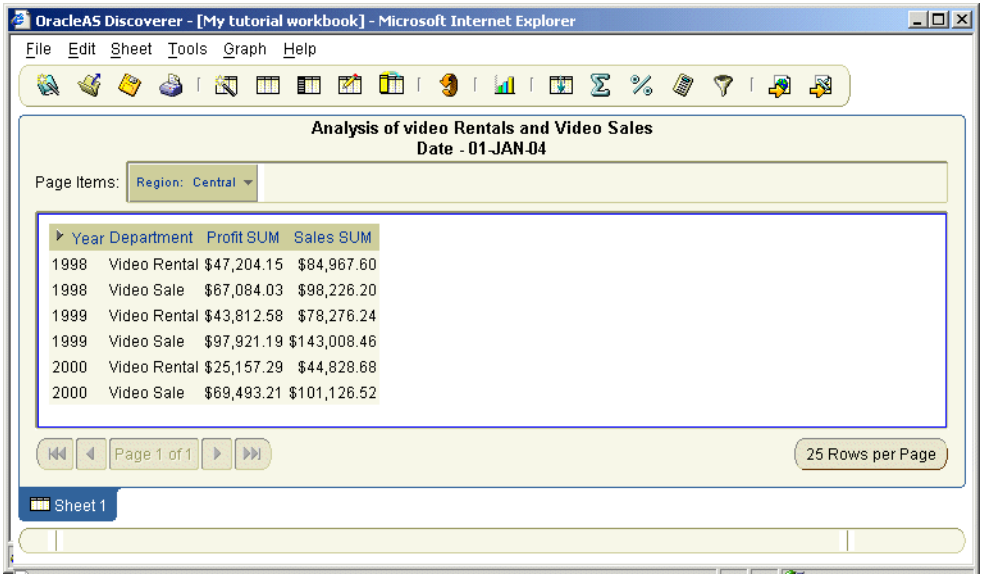
Figure 3–40 Moving the Sales SUM item to the Selected list



5. Click OK to close the Edit worksheet dialog.

   Your worksheet now contains the new item Sales SUM. You can now compare Profit figures with Sales figures.

Figure 3–41 Discoverer worksheet with additional Sales SUM item



Lesson summary

In this lesson you:

- defined new default worksheet settings
- created your own worksheets in a new workbook
- organized items on the worksheet to make them easier to analyze
- created a new worksheet by duplicating an existing worksheet
- reduced the amount of data in a worksheet using conditions and parameters enabling you to publish interactive reports
- added new items to your new workbook

Now you are ready to find out how easy it is to create powerful reports in Discoverer, described in "Lesson 3: Analyzing data".

Frequently asked questions

How does changing default settings affect existing workbooks?

Default settings only affect new workbooks that you create. Changing default settings does not change the layout of existing workbooks or workbooks that were created by other Discoverer Plus users. (To change the format of existing worksheets, choose Sheet | Format.)

Where will you find the name of your workbook on the workbook itself?

The workbook's name is displayed at the top of the workbook, in brackets. For example, [Video Tutorial Workbook].

What is the difference between a condition and a parameter?

Conditions enable you to filter data in the same way each time a workbook or worksheet is opened or refreshed.

Parameters enable you to filter data in a different way each time the workbook or worksheet is opened or refreshed. Parameters also enable you to provide input values to calculations. For more information, see "Glossary".

How do you turn conditions on and off?

From the Tools menu, choose Conditions. In the Conditions dialog, you see a list of conditions that already exist. A selected check box next indicates that a condition is turned on (i.e. active).

For example, the 'Sales by Region' worksheet contains data that answers the question (query) 'What are my company's sales for the Eastern, Central, and Western regions?'.

What is the difference between an item and a page item?

Items are different types of information stored in a folder. For example, if a products folder contains reference numbers, descriptions, and the price of each product, the items in the products folder are reference number, description, and price. Items appear as worksheet columns and rows.

In Lesson 2 you will learn how to select Items from the database with the Workbook Wizard. On a worksheet. In Lesson 3 you will learn how to rearrange Items on a worksheet.

A page item is a filtering item located above a worksheet in the Page Items area. Page items enable you to look at one area of information at a time. For example, if an item called Month is placed in the Page Items area, you might select January from the page item drop down list to produce a January report, then select February to produce a February report and so on.

In Lesson 3, "Exercise 2: Pivoting rows and columns" you will learn how to create Page Items and how to switch between them.

What is the Workbook Wizard?

The Workbook Wizard is a Discoverer tool that helps you create new workbooks or worksheets. The Workbook Wizard takes you step-by-step through the worksheet creation process. In Lesson 2, you will use the Workbook Wizard to create a new worksheet.

Discoverer also provides wizards to help you print and export Discoverer data.

4

Lesson 3: Analyzing data

Lesson 3: Analyzing data

It will probably take you about 45 minutes to complete this lesson.

In lesson 2 you learned how to create your own Discoverer workbook and add conditions and parameters. In this lesson, we return your copy of the Video Tutorial Workbook to learn how to use Discoverer's powerful analysis tools to perform ad hoc analysis. For example, you will use Discoverer to answer typical business questions, such as:

- Why are sales higher in particular regions?
- What other factors contribute to higher sales?
- How do I analyze data visually using graphs?

Note: If you did not save a copy of the Video Tutorial Workbook in lesson 1, you might want to open the Video Tutorial Workbook and save a copy now (for more information about saving workbooks, see "Exercise 3: Saving a copy of the tutorial workbook".

This lesson consists of the following exercises:

- "Exercise 1: Sorting rows and columns"
- "Exercise 2: Pivoting rows and columns"
- "Exercise 3: Drilling in and out of detail"
- "Exercise 4: Adding totals to worksheets"
- "Exercise 5: Adding percentages to worksheets"
- "Exercise 6: Adding mathematical calculations to worksheets"
- "Exercise 7: Adding a ranking calculation to a worksheet"

- "Exercise 8: Graphing worksheet data"
- "Lesson summary"

Exercise 1: Sorting rows and columns

In this exercise you will learn how to sort worksheet data in Discoverer.

Discoverer displays worksheet data arranged into rows and columns, similar to how data is displayed on a spreadsheet. In addition to basic sorting (e.g. A-Z, 1-9), Discoverer provides more sophisticated group sorting, which enables you to remove repeating values and automatically display sub-totals for each group.

To sort data on a worksheet:

1. Connect to the Video Store Tutorial database and open the copy of the Video Tutorial Workbook that you saved in lesson 1.

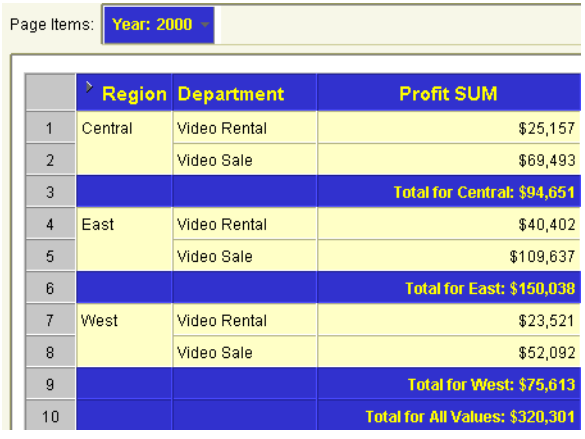
   Note: If you did not save a copy of the Video Tutorial Workbook in lesson 1, you might want to open the Video Tutorial Workbook and save copy now.

   Hint: See Lesson 1: "Exercise 1: Starting Discoverer Plus" and "Exercise 2: Opening the tutorial workbook".

2. Display the Tabular Layout worksheet.

   When the worksheet is displayed, notice that data is sorted alphabetically by Region (i.e. in the order Central, East, West).

Figure 4–1 Tabular Layout worksheet



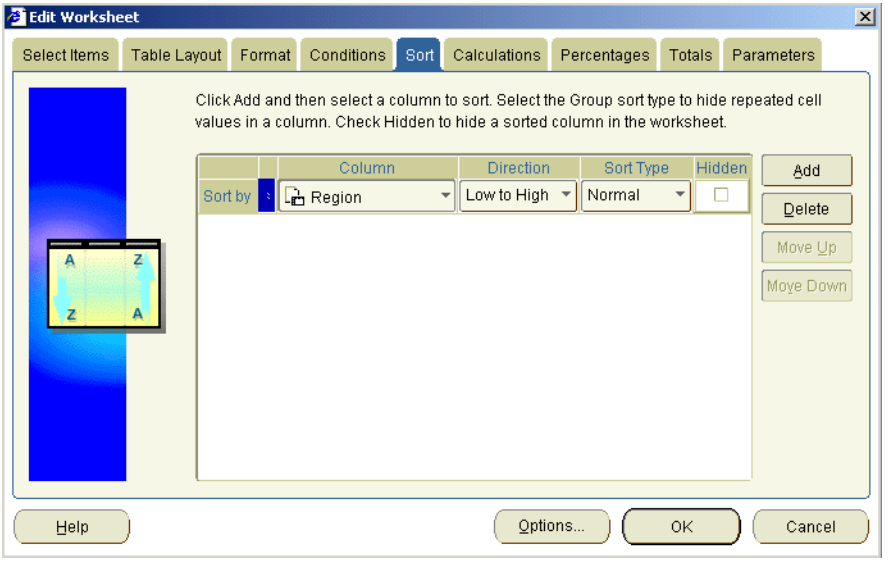
	Region	Department	Profit SUM
1	Central	Video Rental	$25,157
2		Video Sale	$69,493
3			Total for Central: $94,651
4	East	Video Rental	$40,402
5		Video Sale	$109,637
6			Total for East: $150,038
7	West	Video Rental	$23,521
8		Video Sale	$52,092
9			Total for West: $75,613
10			Total for All Values: $320,301

3. From the Page Items area, select 2000 from the **Year** drop down list.

   Instead of sorting by Region, you want to sort by Profit SUM, so that you can analyze performance by arranging Profit SUM figures in descending order, (i.e. highest first).

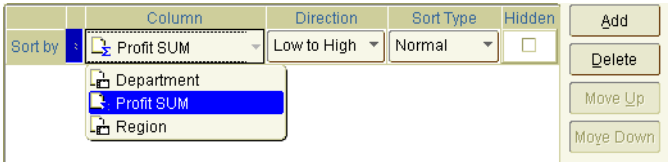
4. Choose Tools | Sort to display the Edit worksheet: Sort tab.

Figure 4–2 Edit Worksheet: Sort tab



5. Select the Region item, then click Delete to remove the existing sort.
6. Click Add to add a new row to the sort list.
7. Select Profit SUM from the **Column** drop down list.

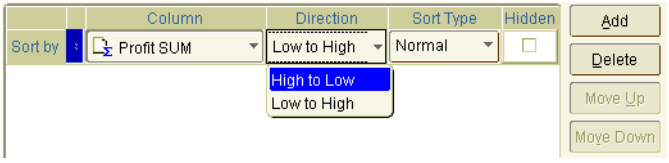
Figure 4–3 Adding a sort item



The **Column** drop down list shows items available to the worksheet. When you select an item from the **Column** drop down list, Discoverer sorts the data on that item.

8. Select High to Low from the **Direction** drop down list.

Figure 4–4 Setting the sort order



9. Leave the value in the **Sort Type** field set to Normal.
10. Click OK to save the details and display the worksheet.

Figure 4–5 Worksheet sorted on Profit SUM

Region	Department	Profit SUM
East	Video Sale	$109,637
Central	Video Sale	$69,493
West	Video Sale	$52,092
East	Video Rental	$40,402
Central	Video Rental	$25,157
West	Video Rental	$23,521
		Total for All Values: $320,301

The data is now sorted by Profit SUM, so that you can easily see that the Video Sale department in the East Region has the highest profits in the year 2000 ($109,637).

When you have finished, if you want to return to the original Video Tutorial Workbook workbook, close the current workbook without saving it.

In this exercise you have learned how to sort data in Discoverer. Now you are ready to use Discoverer's pivoting capabilities to rearrange worksheet data.

Exercise 2: Pivoting rows and columns

In this exercise, you will learn how to rearrange the tutorial worksheet Tabular Layout to display data for one region over many years rather than one year over many regions.

Changing the positions of page items and axis items is called pivoting. In Discoverer, you can pivot items at any time to produce reports in exactly the layout you need. This ability to effortlessly pivot worksheet items is one of the many things that make Discoverer so powerful.

1. Display the Tabular Layout worksheet, if it is not already displayed.

Figure 4–6 Tabular Layout worksheet

Page Items: Year: 2000

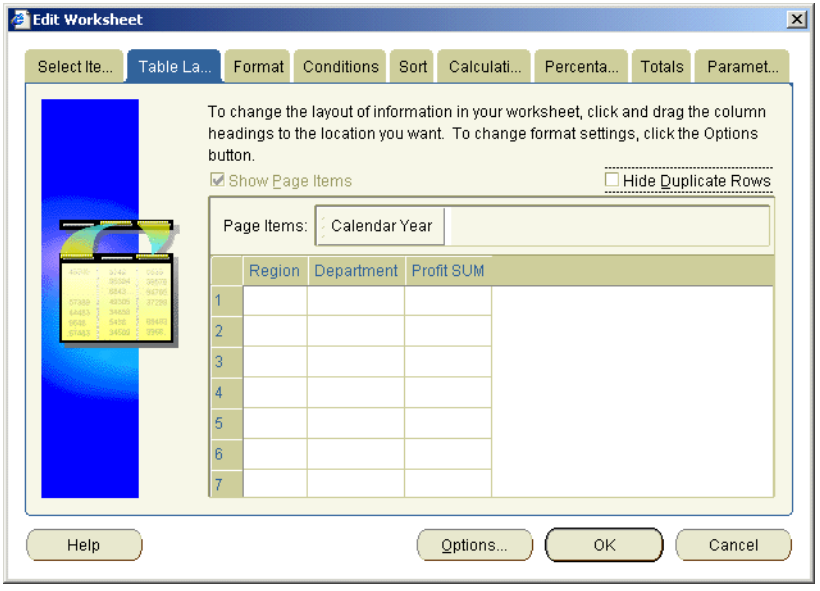
	Region	Department	Profit SUM
1	Central	Video Rental	$25,157
2		Video Sale	$69,493
3			Total for Central: $94,651
4	East	Video Rental	$40,402
5		Video Sale	$109,637
6			Total for East: $150,038
7	West	Video Rental	$23,521
8		Video Sale	$52,092
9			Total for West: $75,613
10			Total for All Values: $320,301

Notice that the worksheet shows figures for all regions (Central, East, and West) over one year (i.e. 2000). Notice also that the Year item is positioned in the Page Items area.

Remember that we want to rearrange this worksheet so that it only displays data for one region over many years. Discoverer's pivoting capabilities make this task easy.

2. Choose Sheet | Table Layout to display the Edit Worksheet dialog at the Table Layout tab.

Figure 4–7 Edit Worksheet: Table Layout tab



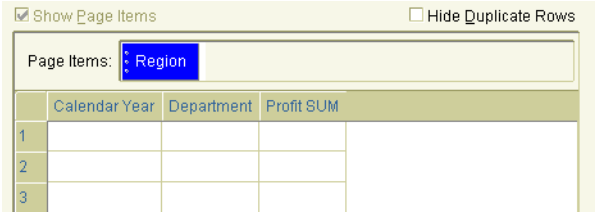
By now you have figured out that you do most of your worksheet editing in Discoverer with the Edit Worksheet dialog. As you would expect, you use the Table Layout tab on the Edit Worksheet dialog to pivot items.

3. Drag and drop the Calendar Year item from the Page Items area down to the left of the Region item on the body of the worksheet.

   When you are moving Items, a black bar indicates where the column will appear.

4. Drag and drop the Region item from the top axis to the Page Items area (where the Calendar Year item used to be).

Figure 4–8 Edit Worksheet: Table Layout tab after items have been repositioned



5. Click OK to close the Edit Worksheet dialog and display the worksheet.

Notice that the worksheet now shows all the years on a single page. Notice also that the worksheet displays data for only one region (Central), which is positioned in the Page Items area.

Figure 4–9 Tabular Layout worksheet with Region item in the Page Items area

	Year	Department	Profit SUM
1	1998	Video Rental	$47,204
2	1999	Video Rental	$43,813
3	2000	Video Rental	$25,157
4	1998	Video Sale	$67,084
5	1999	Video Sale	$97,921
6	2000	Video Sale	$69,493
7			Total for All Values: $350,672

6. To display data for a different region, select a new value from the **Region** drop down list in the Page Items area.

Notice how the worksheet is updated automatically when you select a new Region.

Having rearranged the tutorial worksheet, you are now ready to explore Discoverer's drilling capabilities.

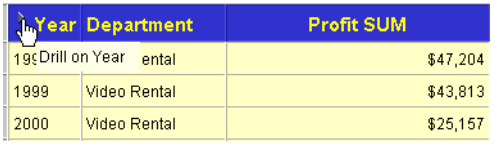
Exercise 3: Drilling in and out of detail

In this exercise you will learn how to drill into and out of data in Discoverer to change the level of detail that you display on a worksheet.

Now that you see data for each department group sorted by year, you might wonder 'Are sales better in some quarters than others?' Right now your worksheet only shows a summary of each year. To answer this question, you need to drill into the data and show detailed sales information by quarter.

You can drill on any item that has a drill icon next to it. On the worksheet, notice a small triangle next to the Year item.

Figure 4–10 Drill icon on Tabular Layout worksheet

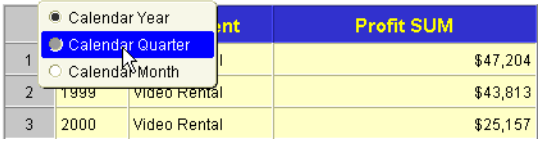


This is a drill icon, which indicates that you can drill deeper into this item to display more detail (e.g. quarterly, or weekly data).

To drill into and out of data:

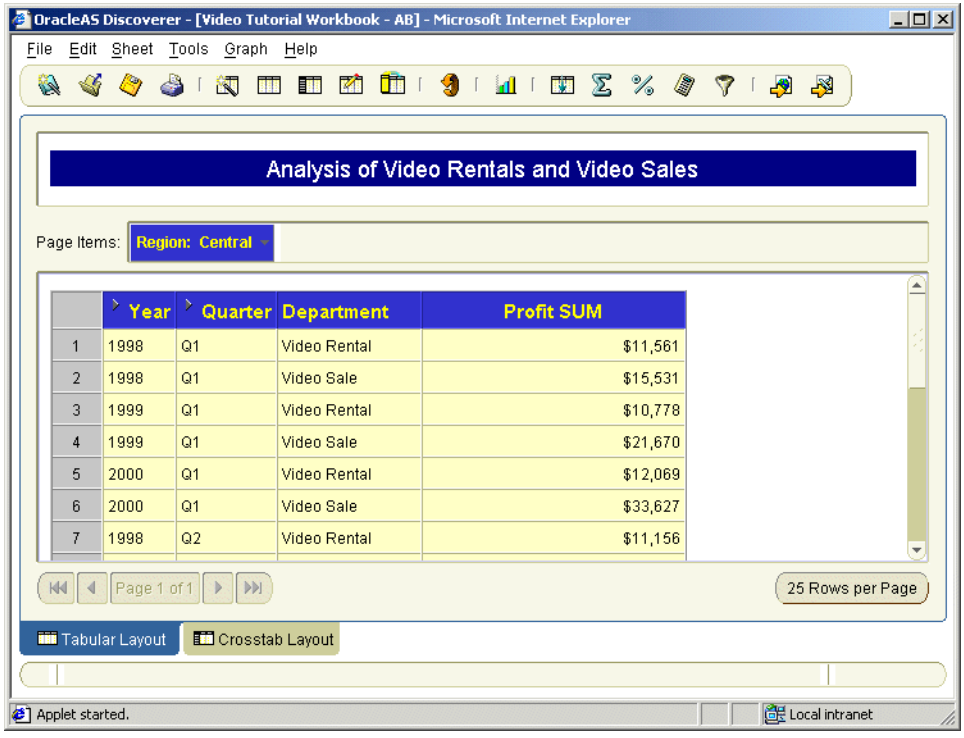
1. Click the drill icon next to the Year item heading to displays drill options.
2. Select Calendar Quarter from the drill options to display quarter level detail on the worksheet.

Figure 4–11 Drill options on Year item



Discoverer adds a new column to the worksheet for the Quarter item. Notice that the profit data is also now broken down for each Quarter. Notice also the drill icon next to the Quarter item heading, which means that you can drill down even further to display more detail.

Figure 4–12 Tabular Layout worksheet



3. To drill out of the quarterly data back to the original worksheet (also known as collapsing the data), click the drill icon next to the Quarter item heading and select Calendar Year from the list of options.

Note: When you want to remove detail data, you can also click the drill icon and select Collapse.

Discoverer removes the Quarter item from the worksheet and re-displays the consolidated profit figures at Calendar Year level.

Having explored Discoverer's drilling capabilities, you are ready to aggregate the worksheet data using worksheet totals in Discoverer.

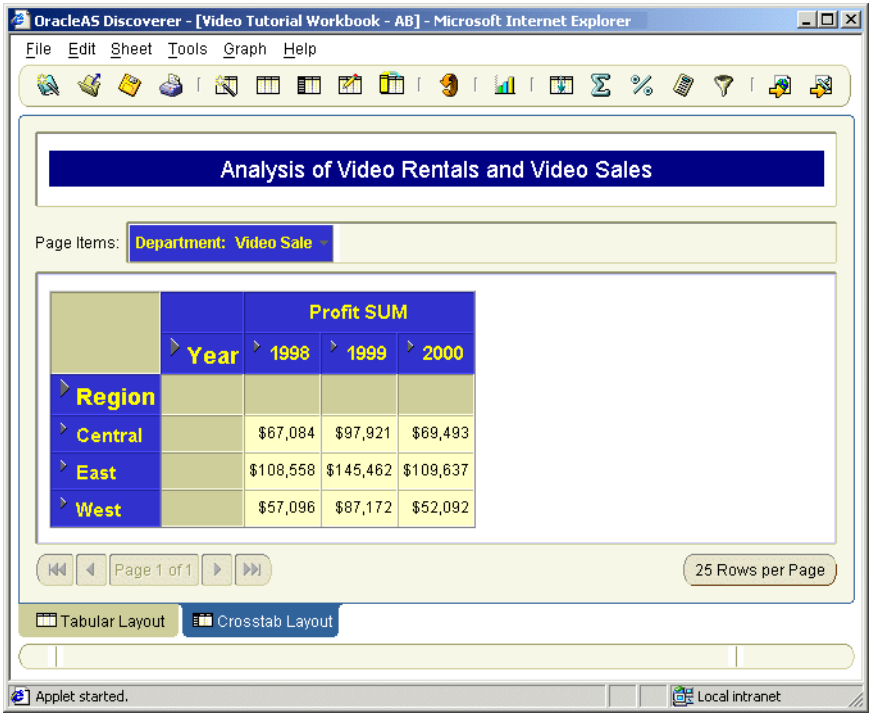
Exercise 4: Adding totals to worksheets

In this exercise you will learn how to aggregate worksheet data by calculating totals (e.g. sum, average, minimum). In Discoverer, you do this by adding a total item to a worksheet.

Hint: This example uses the Crosstab Layout worksheet.

1. Display the Crosstab Layout worksheet, if it is not already displayed.

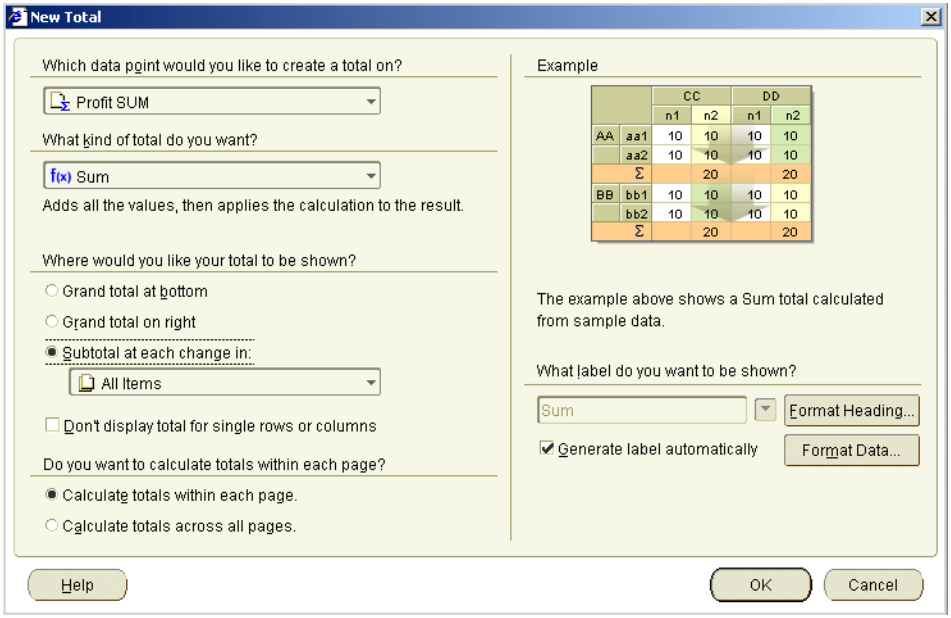
Figure 4–13 Crosstab Layout worksheet



Notice that the worksheet contains profit figures by region and year. In this exercise, we want to calculate profit totals for each year.

2. Choose Tools | Totals to display the Edit Worksheet dialog at the Totals tab.
3. Click New to display the New Total dialog.

Figure 4–14 New Total dialog



4. Click the '**Which data point would you like to create a total on?**' drop down list and select Profit SUM.

5. Click the '**What kind of total do you want?**' drop down list and select 'f(x) Sum'.

   Notice that Discoverer offers a large range of other totals to choose from, such as Average, Maximum, and Minimum. In this case, you want to select 'f(x) Sum' to add up the Profit SUM item values.

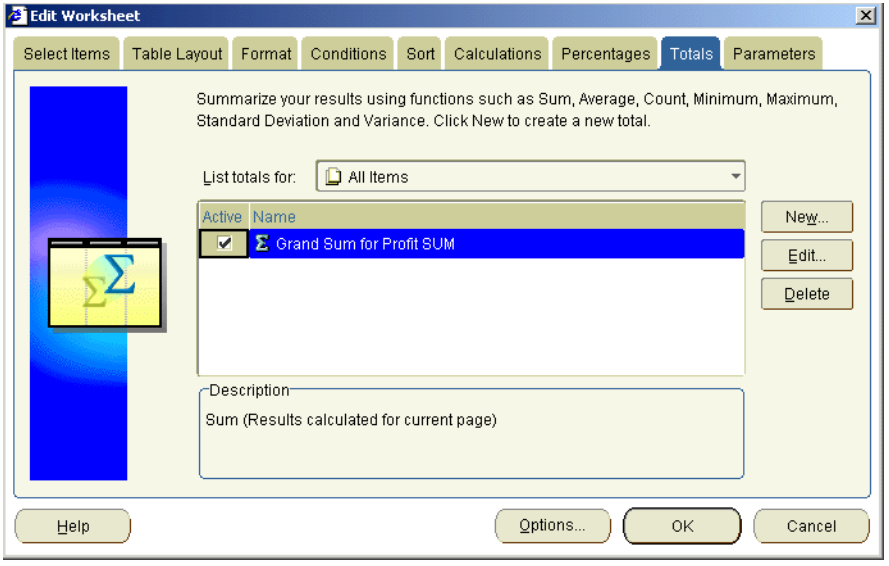
6. Select the 'Grand total at bottom' radio button from the '**Where would you like your total to be shown?**' options.

   Notice that because we also have numeric data running laterally over the crosstab worksheet, the New Total dialog also has a 'Grand total on right' radio button. If we selected the 'Grand total at bottom' radio button we would calculate a total for each region.

7. Click OK to save the details and close the New Total dialog and return to the Edit Worksheet dialog.

Notice that the new total, called 'Grand Total Rows Sum for Profit SUM', is displayed in the totals list. The selected check box next to the item indicates that it is turned on (i.e. active).

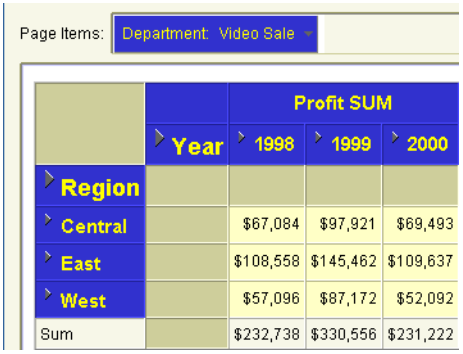
Figure 4–15 Edit Worksheet dialog: Totals tab



8. Click OK to close the Edit Worksheet dialog and display the worksheet.

Discoverer refreshes the worksheet and displays a new set of totals at the bottom of the worksheet. Here, we see a total profit value for each year. For example, the total profit value for the year 2000 is $231,222.

Figure 4–16 Crosstab Layout worksheet with total item



		Profit SUM		
	Year	1998	1999	2000
Region				
Central		$67,084	$97,921	$69,493
East		$108,558	$145,462	$109,637
West		$57,096	$87,172	$52,092
Sum		$232,738	$330,556	$231,222

By using Discoverer's range of totals, you can create powerful business reports. Repeat the exercise and experiment with different styles of total and types of total. For example, you might average profit figures for each region.

Having calculated totals in Discoverer, you are ready to create percentages.

Exercise 5: Adding percentages to worksheets

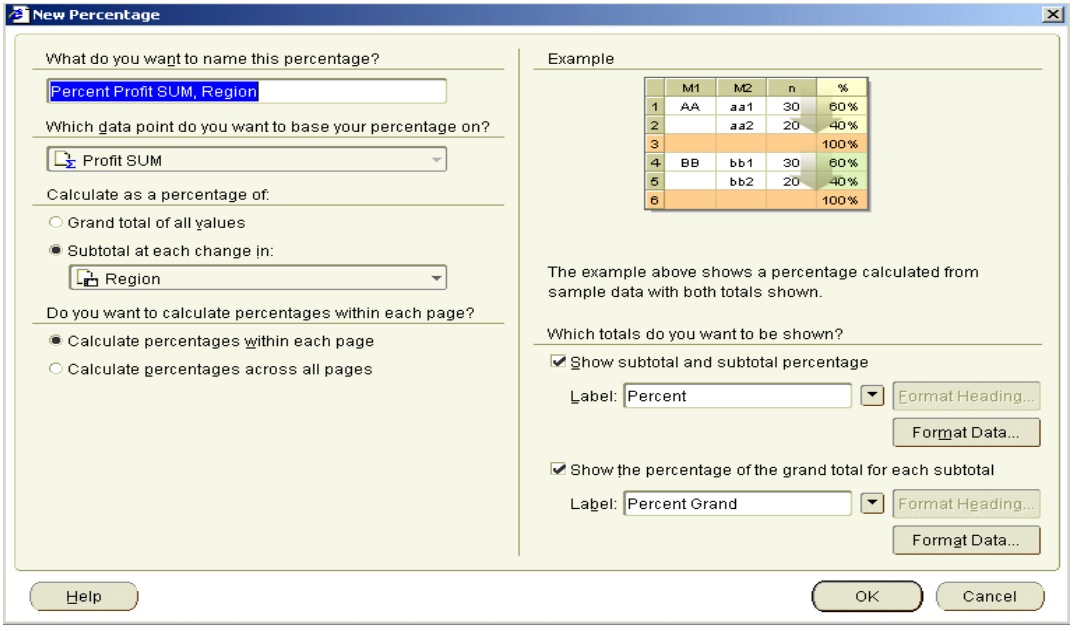
In this exercise you will learn how to add a percentage to calculate how each department contributed to annual profits. You will find out which departments are performing well and which are not performing well.

To answer these questions, we will add a new column to the worksheet to calculate this percentage value for you.

To add a percentage item:

1. Display the Tabular Layout worksheet, if it is not already displayed.
2. Choose Tools | Percentages to display the Edit Worksheet dialog at the Percentages tab.
3. Click New to display the New Percentage dialog.

Figure 4–17 New Percentage dialog



4. Type `Percentage of Annual Profit` in the **What do you want to name this percentage?** field.

   You want Discoverer to find the grand total of the profits for all departments, and then calculate the percentage that each department contributed to the grand total.

5. Choose 'Profit SUM' from the **Which data point do you want to base your percentage on?** drop down list.

6. Choose 'Subtotal at each change in' from the **Calculate as a percentage of** drop down list, then select 'Calendar Year' from the pull-down list below.

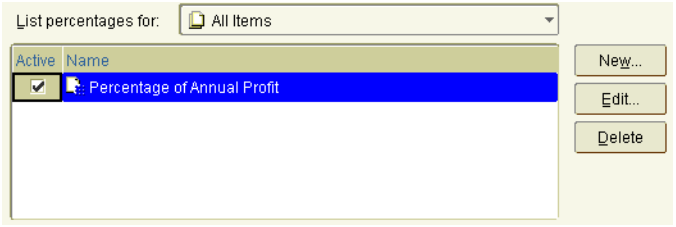
7. Choose the 'Calculate percentages within each page' radio button from the **Do you want to calculation percentages within each page?** options.

   Discoverer calculates a total percentage for Page Items in your worksheet. In this case, you have only one Page Item, which is Region. Discoverer calculates the total percentage for all regions.

8. Select the **Show subtotal and subtotal percentage** check box.

9. Clear the **Show the percentage of the grand total for each subtotal** check box.
10. Click OK to return to close the New Percentage dialog and return to the Percentages tab.

Figure 4–18 Percentages list



The new percentage item **Percentage of Annual Profit** is displayed in the Percentages list. The check box next to the item is selected by default.

11. Click OK to close the Percentages tab and return to the worksheet.

Figure 4–19 Tabular Layout worksheet with percentage item

Page Items: Year: 2000

	Region	Department	Profit SUM	Percentage of Annual Profit
1	Central	Video Rental	$25,157	8%
2		Video Sale	$69,493	22%
3	**Total for Central**		**$94,651**	
4	East	Video Rental	$40,402	13%
5		Video Sale	$109,637	34%
6	**Total for East**		**$150,038**	
7	West	Video Rental	$23,521	7%
8		Video Sale	$52,092	16%
9	**Total for West**		**$75,613**	
10	**Total for All Values**		**$320,301**	
11	Percent		$320,301	100%

Discoverer displays the new percentage on the worksheet as a new column called Percentage of Annual Profit.

Looking at the new Percentage of Annual Profit item, we can see that the Video Sale department in the East region contributed most to annual profit (i.e. 34%). We can also see that the Video Rental department in the West region contributed least to annual profit (i.e. 7%).

As you can see, Discoverer does the difficult calculation work for you.

Having calculated totals on the tutorial worksheet, you are ready to create a new worksheet item based on a mathematical calculation.

Notes:

- If you want to remove the **Percentage of Annual Profit** item from the worksheet, choose Tools | Percentages to display the Edit Worksheet dialog at the Percentages tab, then clear the check box next to the **Percentage of Annual Profit** item**.**

Exercise 6: Adding mathematical calculations to worksheets

In this exercise you will learn how to add a mathematical calculation to a worksheet to enable you to create powerful reports.

Discoverer includes a huge range of predefined text handling and mathematical functions that you can use to build custom calculations. You can also use analytical functions to perform complex statistical analysis such as:

- ranking (e.g. creating league tables)
- windowing (e.g. calculating a moving average)
- banding (e.g. to create histograms)

Do you need to find the profit margin for each department? Do you want to calculate the commission earned by your sales people? Do you want to calculate sales tax and show it in the worksheet? Using Discoverer's calculations capability, you can create custom calculations that meet your own unique business needs.

In this exercise, you will create a custom calculation to calculate an 8% sales tax amount for each department's profit.

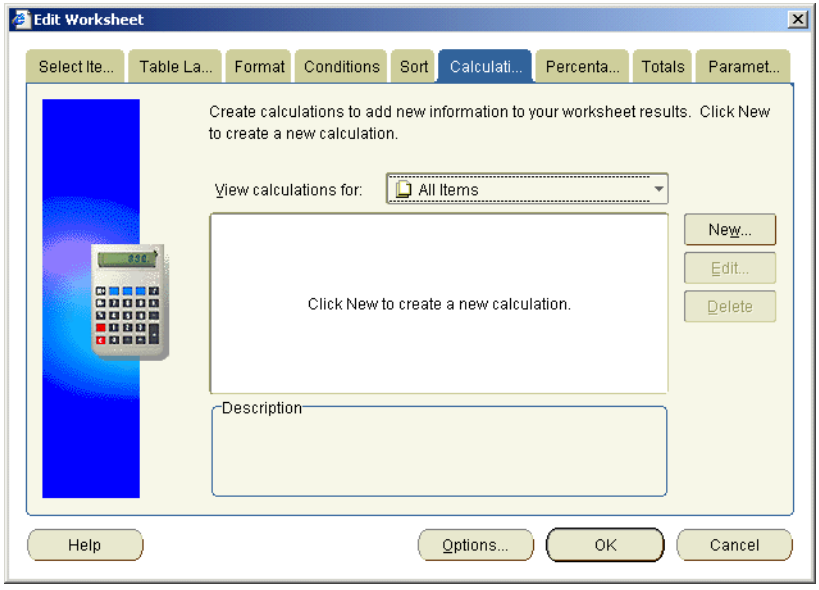
Hint: You might want to hide the percentage item created in the last exercise (i.e. choose Tools | Percentages to display the Percentages dialog, and clear the **Active** check box next to the Percent of Annual Profit item).

To create a mathematical calculation:

1. Display the Tabular Layout worksheet, if it is not already displayed.

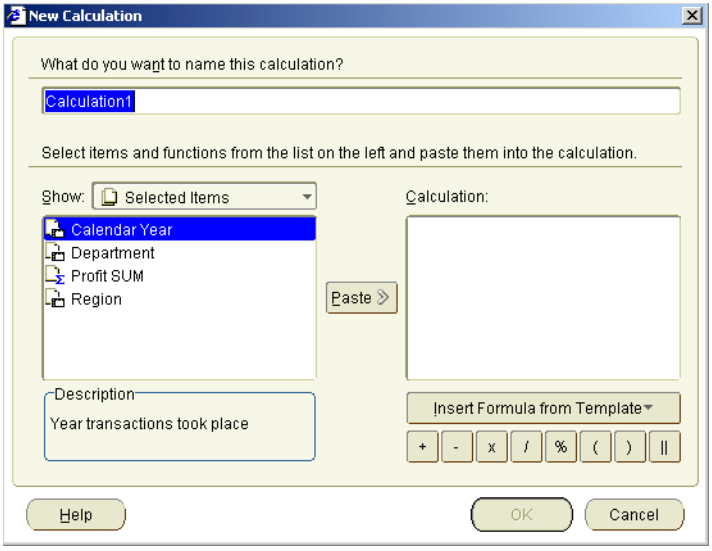
2. Choose Tools | Calculations to display the Edit Worksheet dialog at the Calculations tab.

Figure 4–20 Edit Worksheet: Calculation tab



3. Click New to display the New Calculations dialog.

Figure 4–21 New Calculation dialog



4. Type `Sales Tax` in the **What do you want to name this calculation?** field.

   You want Discoverer to the calculate sales tax for each department's profit.

5. In the **Show** list, select Profit SUM then click Paste.

   Notice that 'Video Analysis Information.Profit SUM' moves to the **Calculation** box.

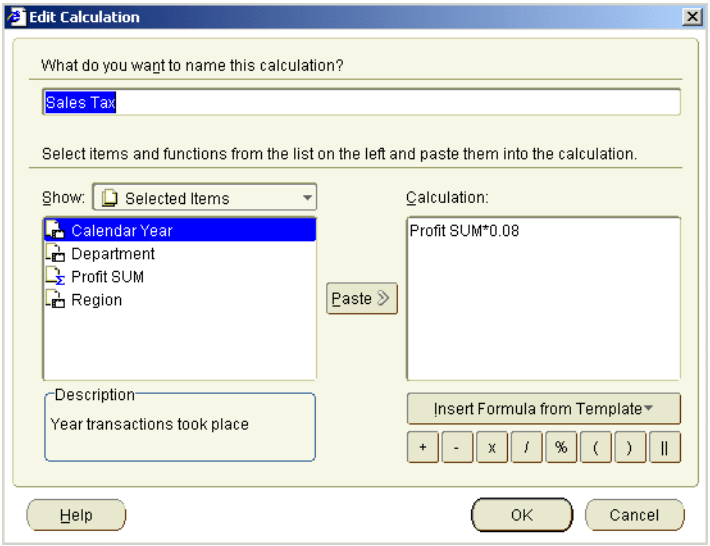
   Note: Remember that Video Analysis Information is the name of the business area that we are using.

   To calculate a sales tax of eight percent, you will multiply the Profit SUM item by 0.08.

6. Click inside the **Calculation** box and position the cursor immediately after the text 'Video Analysis Information.Profit SUM'.

7. Type `* 0.08` (i.e. the multiplication symbol '*' followed by 0.08).

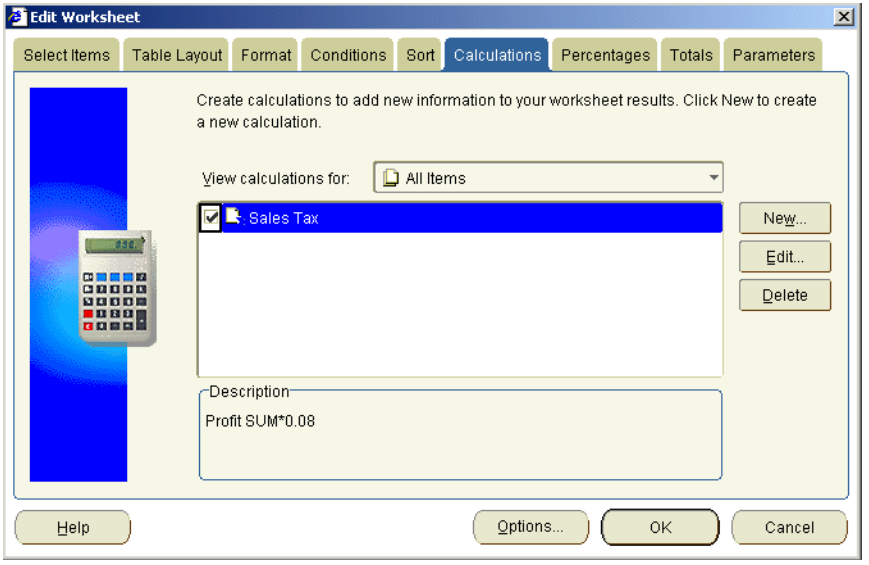
Figure 4–22 Calculation box containing the Sales Tax calculation



8. Click OK to save the details and close the New Calculation dialog.

The new calculation item is displayed in the Calculations list. The check box next to the item is selected by default, which if you remember means that it is turned on (or active).

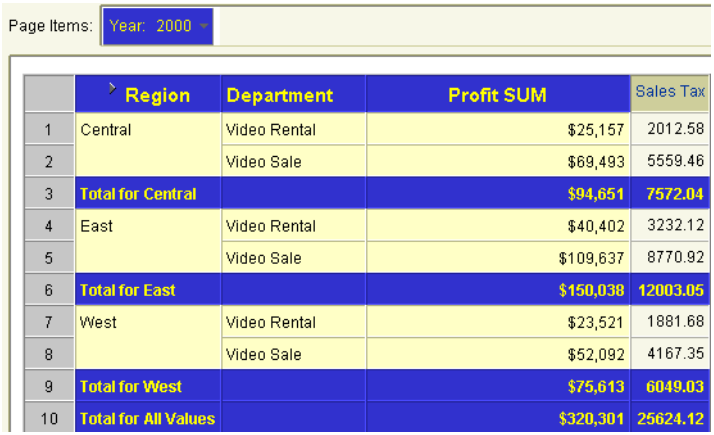
Figure 4–23 Edit Worksheet: Calculation tab



9. Click OK to close the Calculations tab and return to the worksheet.

Discoverer displays the new calculation on the worksheet as a new column called Sales Tax.

Figure 4–24 Tabular Layout worksheet with Sales Tax calculation



Page Items: Year: 2000

	Region	Department	Profit SUM	Sales Tax
1	Central	Video Rental	$25,157	2012.58
2		Video Sale	$69,493	5559.46
3	**Total for Central**		**$94,651**	**7572.04**
4	East	Video Rental	$40,402	3232.12
5		Video Sale	$109,637	8770.92
6	**Total for East**		**$150,038**	**12003.05**
7	West	Video Rental	$23,521	1881.68
8		Video Sale	$52,092	4167.35
9	**Total for West**		**$75,613**	**6049.03**
10	**Total for All Values**		**$320,301**	**25624.12**

You can now see that the sales tax for the Video Rental department in the Central region is 2012.58.

You want to reformat the Sales Tax item so that sales tax figures are displayed with the currency symbol.

10. Choose Sheets | Format to display the Format tab.
11. Select Sales Tax from the item list and click Format Data.
12. Display the Number tab, and choose Currency from the **Categories** list.
13. Click OK to close the Number tab, then click OK again to close the Format tab.

    Notice that the sales tax figures on your report have the currency symbol.

As you can imagine, the ability to create custom calculations to enhance your reports is one of the analysis features that make Discoverer so powerful. You can choose from hundreds of pre-defined functions in the Oracle database to analyze data in powerful ways.

Having learned how to create a mathematical calculation, you are now ready to learn how to create a more complex analytic function.

Notes:

- If you want to remove the **Sales Tax** item from the worksheet, choose Tools | Calculations to display the Edit Worksheet dialog at the Calculations tab, then clear the check box next to the **Sales Tax** item**.**

Exercise 7: Adding a ranking calculation to a worksheet

In this exercise you will learn how to use one of Discoverer's easy-to-use analytic function templates to create a league table (i.e. rank) calculation.

In this exercise, you want to calculate the league table position of cities, based on profits in the year 2000.

To create a ranking calculation:

1. Display the Tabular Layout worksheet, if it is not already displayed.

   Before you create the calculation, you will remove the totals from the worksheet so that they are not included in the league table, then pivot the Department item to the Page Items area. Finally, you will drill down to City data.

2. Choose 2000 from the **Year** drop down list in the Page Items area.

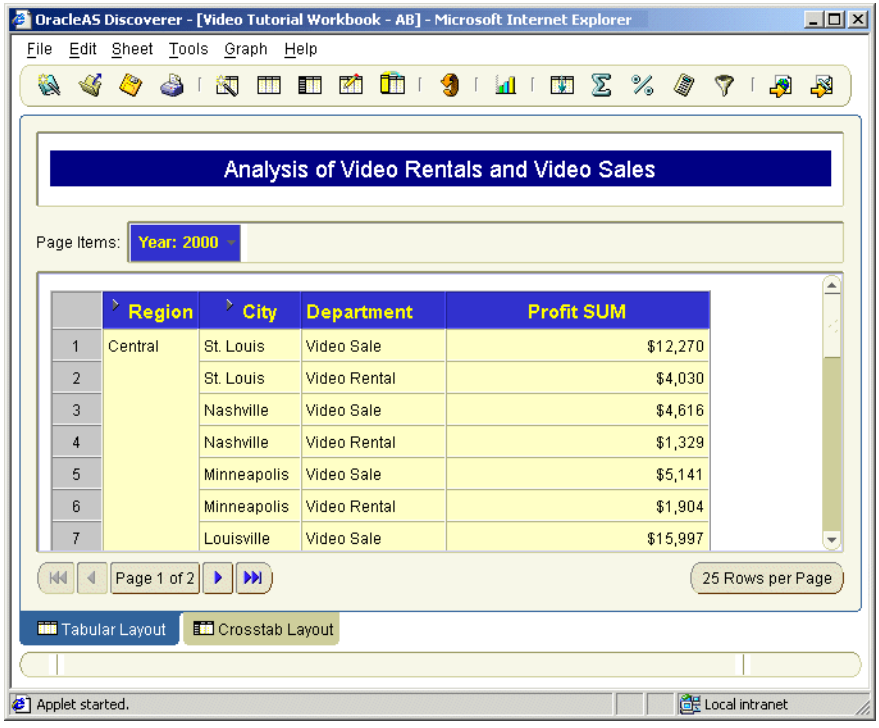
3. Choose Tools | Totals to display the Edit Worksheet dialog at the Totals tab.

4. Clear the check box next to all totals in the totals list, then click OK to return to the worksheet.

5. Click the drill icon next to the Region column heading and select City from the drill options.

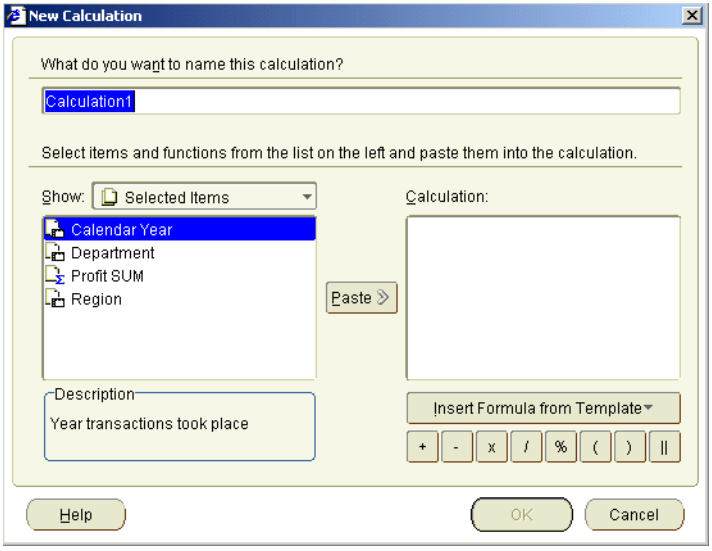
   The City item is added to the worksheet.

Figure 4–25 Tabular Layout worksheet drilled to City item



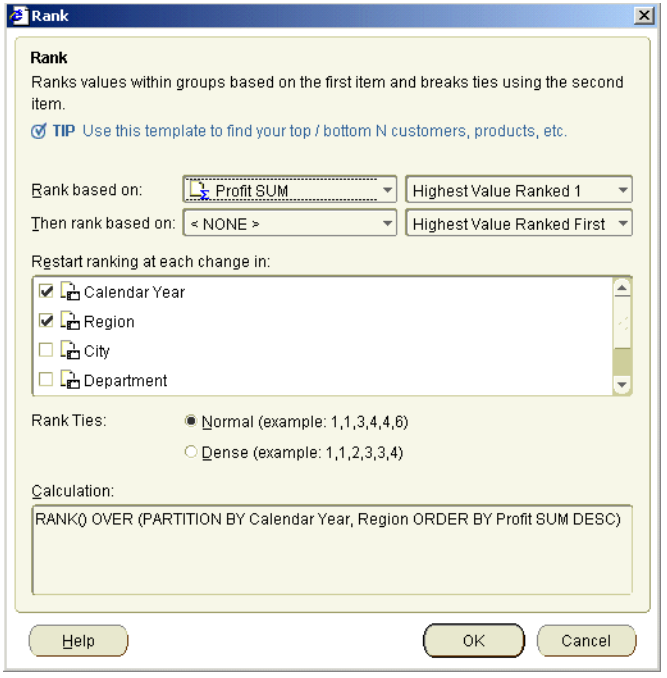
6. Choose Tools | Calculations to display the Edit Worksheet dialog at the Calculations tab.
7. Click New to display the New Calculation dialog.

Figure 4–26 New Calculation dialog

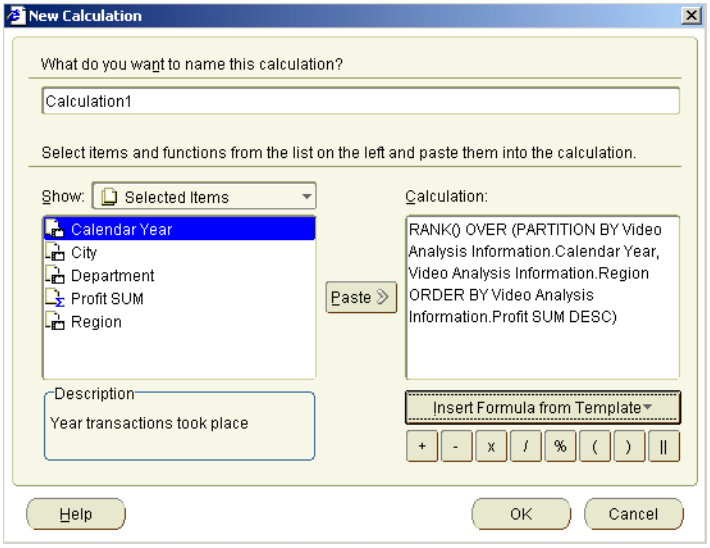


8. Type `Cities league table` in the **What do you want to name this calculation?** field.
9. Click Insert Formula from Template to display a drop down list of analytic function templates.
10. Select Rank from the drop down list of analytic function templates to display the Rank dialog.

Figure 4–27 Rank dialog



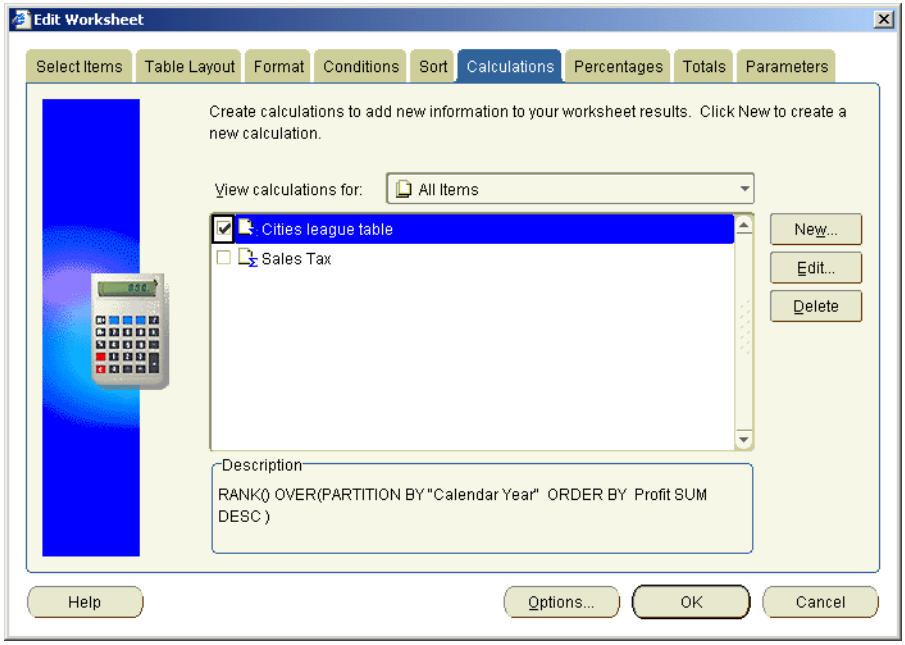
11. Click OK to save the details and display the New Calculation dialog.



Notice that the **Calculation** field contains a RANK() formula, which you created using the Rank dialog.

12. Click OK to save the details and display the Calculations dialog.
13. Click OK to display the worksheet.

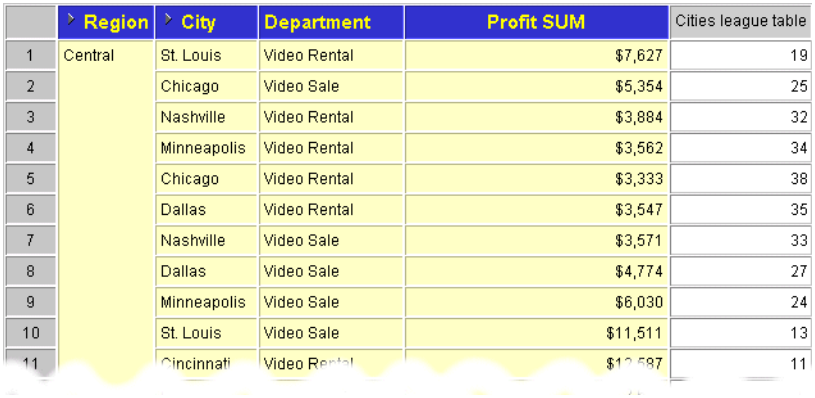
Figure 4–28 Edit Worksheet: Calculation tab



14. Click OK to close the Calculations tab and return to the worksheet.

Discoverer displays the new calculation on the worksheet as a new column called 'Cities league table'.

Figure 4–29 Tabular Layout worksheet with Cities league table calculation

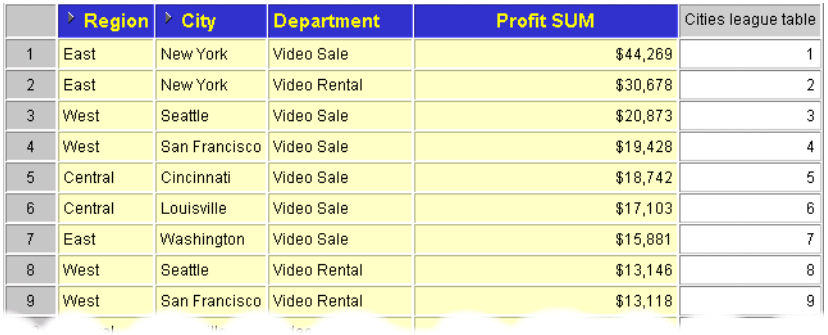


	Region	City	Department	Profit SUM	Cities league table
1	Central	St. Louis	Video Rental	$7,627	19
2		Chicago	Video Sale	$5,354	25
3		Nashville	Video Rental	$3,884	32
4		Minneapolis	Video Rental	$3,562	34
5		Chicago	Video Rental	$3,333	38
6		Dallas	Video Rental	$3,547	35
7		Nashville	Video Sale	$3,571	33
8		Dallas	Video Sale	$4,774	27
9		Minneapolis	Video Sale	$6,030	24
10		St. Louis	Video Sale	$11,511	13
11		Cincinnati	Video Rental	$12,587	11

To make the data easier to analyze, in the final step you sort the worksheet on the 'Cities league table' item.

15. Choose Tools | Sort to display the Edit Worksheet dialog at the Sort tab.
16. Select Region in the sort list, then click Delete.
17. Click Add, then select 'Cities league table' from the drop down list.
18. Click OK to save the details and return to the worksheet.

Figure 4–30 Tabular Layout worksheet with sorted Cities league table calculation



	Region	City	Department	Profit SUM	Cities league table
1	East	New York	Video Sale	$44,269	1
2	East	New York	Video Rental	$30,678	2
3	West	Seattle	Video Sale	$20,873	3
4	West	San Francisco	Video Sale	$19,428	4
5	Central	Cincinnati	Video Sale	$18,742	5
6	Central	Louisville	Video Sale	$17,103	6
7	East	Washington	Video Sale	$15,881	7
8	West	Seattle	Video Rental	$13,146	8
9	West	San Francisco	Video Rental	$13,118	9

Now that data is sorted on 'Cities league table', you can easily see that the highest ranked row is New York, Video Sale department (i.e. $44,269).

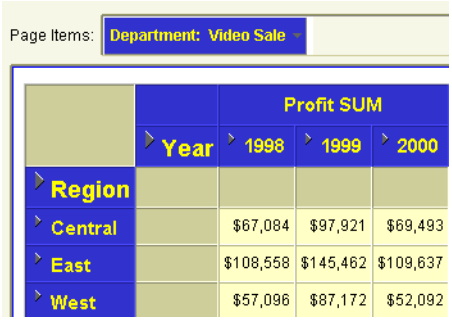
Hint: You could use the Cities league table calculation item to do top-*N* analysis. For example, to find the top ten performing cities, you might create a condition to find data where the Cities league table value is less than or equal to ten. In other words you create a condition with the condition formula 'Cities league table <= 10'.

Exercise 8: Graphing worksheet data

In this exercise you will learn how to analyze worksheet data visually using graphs. You will create a bar chart to compare profit figures for the Video Sales and Video Rentals departments in 1998, 1999, and 2000.

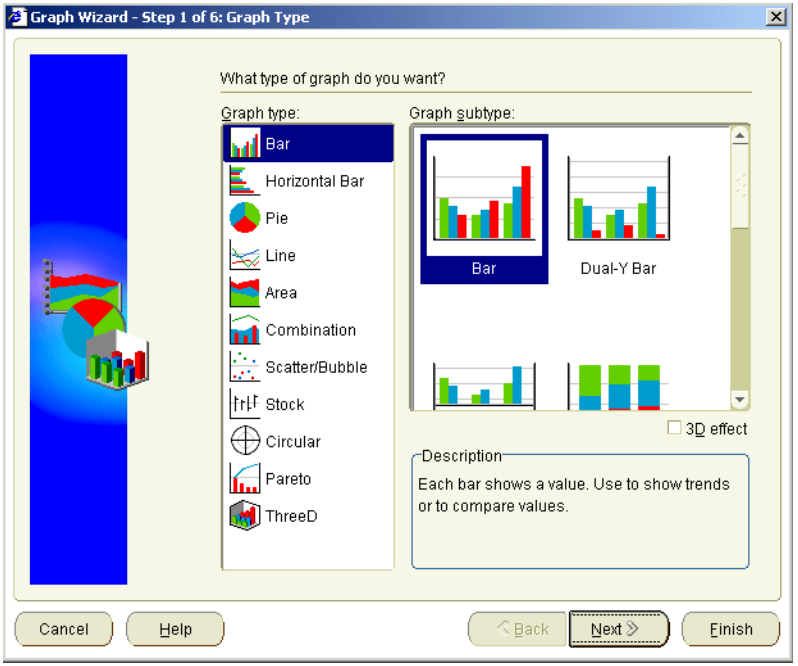
1. Display the Crosstab Layout worksheet, if it is not already displayed.

Figure 4–31 Crosstab worksheet



2. Choose Graph | New Graph to start the Graph Wizard.

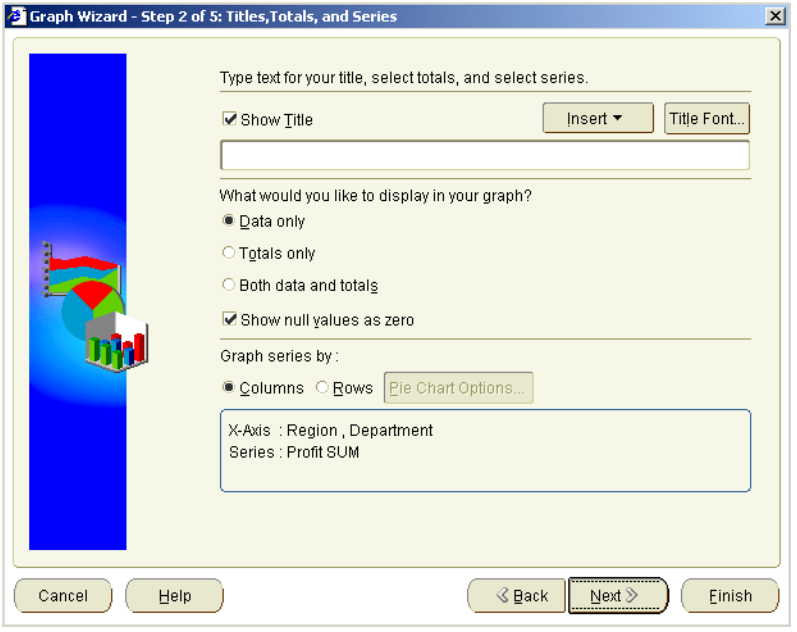
Figure 4–32 Graph Wizard: Graph Type dialog



3. Select the Bar option from the **Graph type** list.
4. Select the Bar option from the **Graph subtype** list.

   Note: Make sure that the **3D Effect** check box is selected. 3D is an acronym of three-dimensional.
5. Click Next to display the Graph Wizard: Titles, Totals, and Series page of the Graph Wizard.

Figure 4–33 Graph Wizard: Titles, Totals, and Series dialog

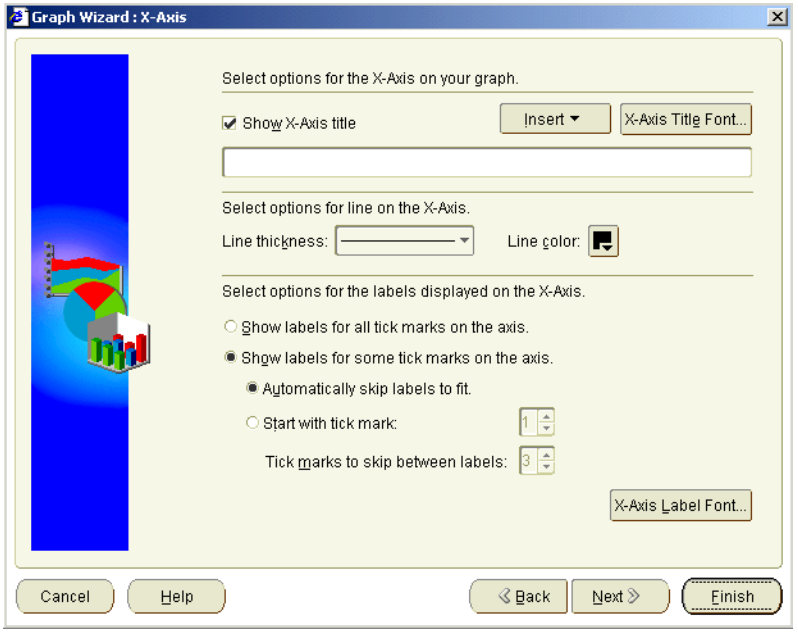


6. Type `Profits 1998, 1999,and 2000` in the title field.

   Note: Make sure that the **Show Title** check box is selected.

7. Click Next to display the Graph Wizard: X-Axis page of the Graph Wizard.

Figure 4–34 Graph Wizard: X-Axis dialog



8. Type `Region` in the title field.

   Note: Make sure that the **Show X-Axis Title** check box is selected.

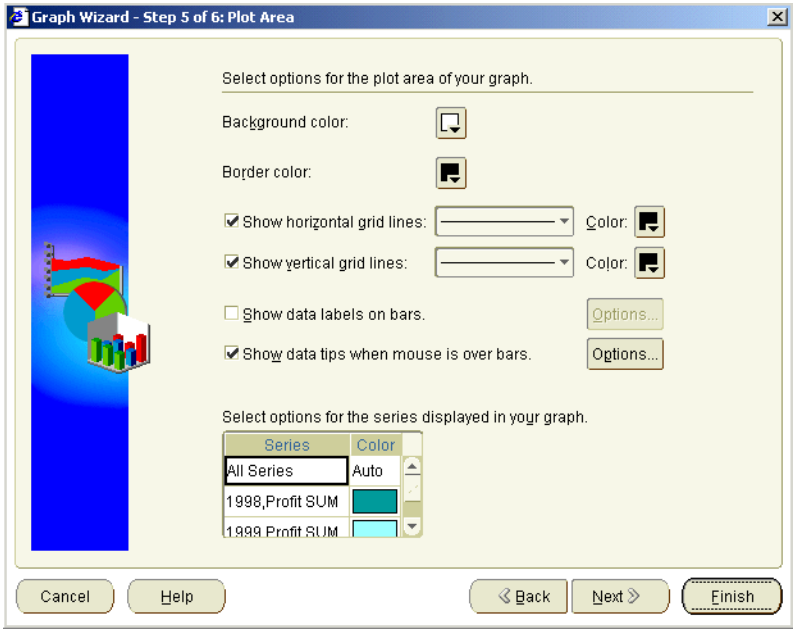
9. Click Next to display the Graph Wizard: Y-Axis page of the Graph Wizard.

10. Type `Profits` in the title field.

    Note: Make sure that the **Show Y-Axis Title** check box is selected.

11. Click Next to display the Graph Wizard: Plot Area page of the Graph Wizard.

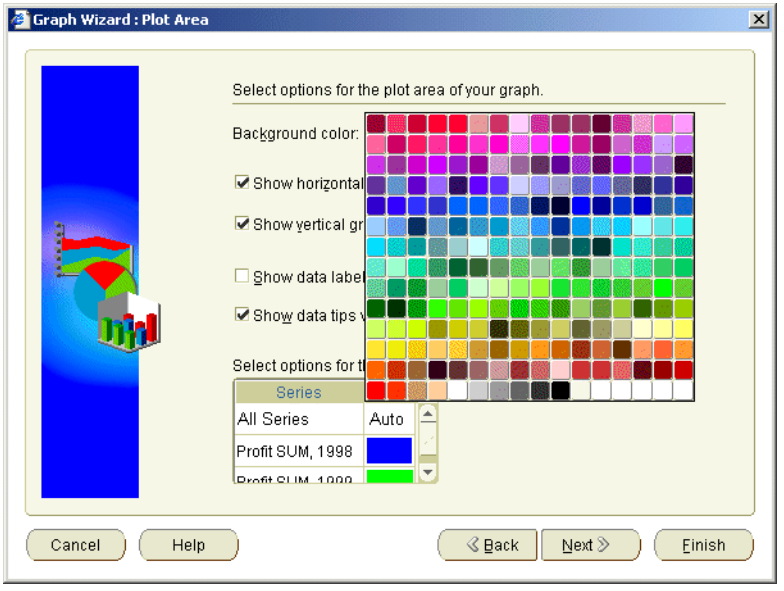
Figure 4–35 Graph Wizard: Plot Area



Notice that data columns (known as series) are assigned default colors (e.g. Profit SUM, 1998 is blue). Here, we will change the default color for Profit SUM, 1998.

12. Click the color block next to Profit SUM, 1998 to display the color picker pane, then select a red shade from the color options.

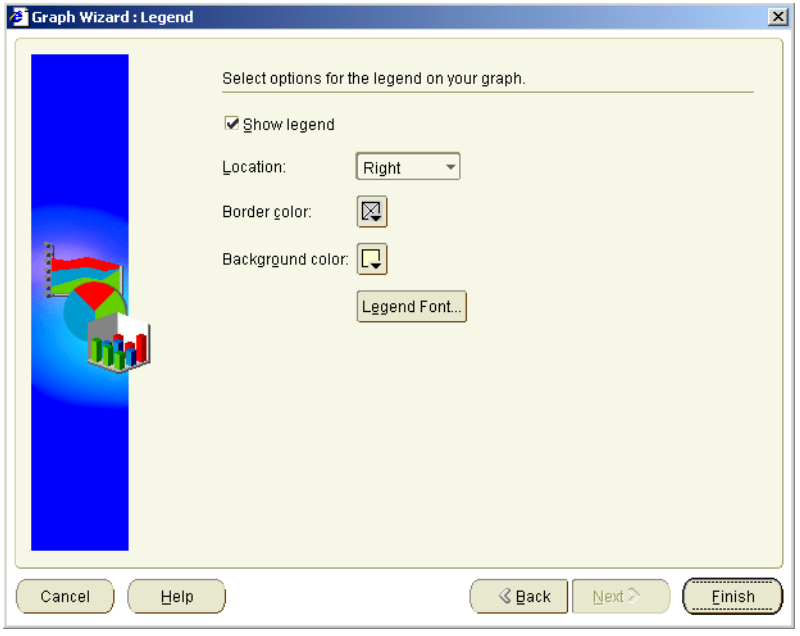
Figure 4–36 Color picker dialog



The column Profit SUM, 1998 is now represented in red.

13. Click Next to display the Graph Wizard: Legend page of the Graph Wizard.

Figure 4–37 Graph Wizard: Legend page

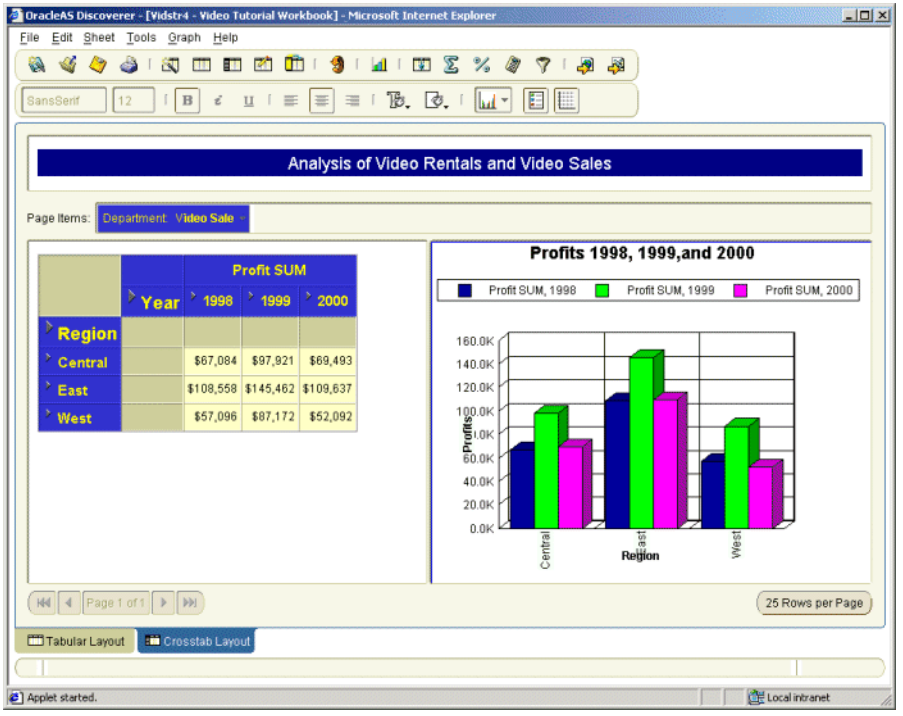


14. Choose Top from the **Location** pull-down list to display the legend at the top of the graph.

    The Sample pane is updated to show you how the graph will look.

15. Click Finish to close the Graph Wizard and return to the worksheet.

Figure 4–38 Crosstab Worksheet with graph



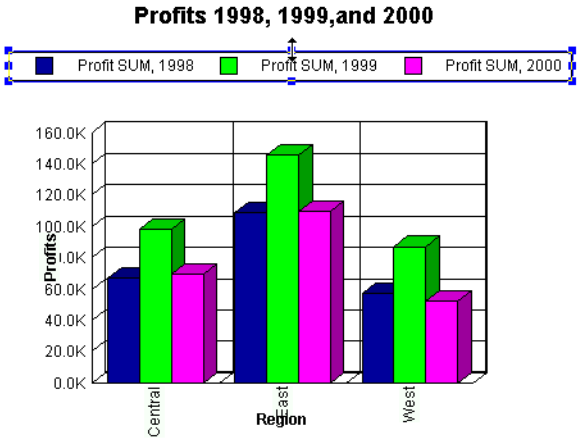
Depending on the default position setting, your graph is displayed either as part of the worksheet or in a separate window.

Hint: If your graph is not visible on your worksheet, choose Graph | Display Graph and select Right of Data option.

Notes:

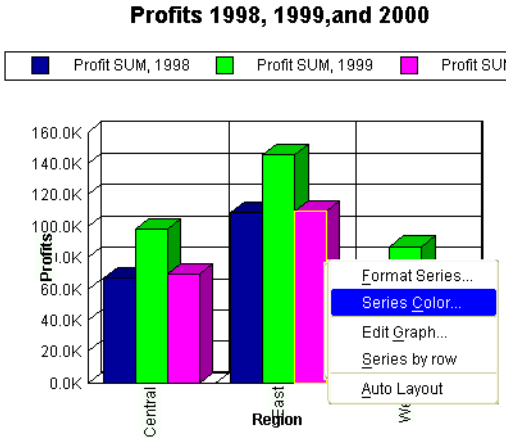
- Now that you have created your graph, you can edit it on screen by clicking elements and dragging them to another location. Or, you can right-click elements to display editing menus. Click to the right or left of the legend to display its blue editing box, click a corner point, and then drag it to re-size the legend. Or, to re-position the legend, drag the whole editing box to a new position.

Figure 4–39 Editing the graph legend



- You can also right click graph elements to access editing options, for example to display the Graph Wizard. Right-click over one of the columns to display the editing menu, then select Series Color to display the color picker panel.

Figure 4–40 Using the right-click menu to edit graph objects



- If you have time, go back to the Graph Wizard and experiment with different types of graph with different styles of worksheet. You will find that Discoverer provides an extensive range of graphs and charts that can enhance even the most complex report.

Having created your graph, you can now print it or export it as part of your worksheet. For more information, see "Lesson 4: Sharing your data".

Lesson summary

In this lesson you:

- sorted worksheet data
- rearrange worksheet data
- drilled into worksheet data
- added percentages to a worksheet
- add calculations to a worksheet
- created a graph of worksheet data

Now you are ready to find out how easy it is to export your reports in Discoverer, described in "Lesson 4: Sharing your data".

5

Lesson 4: Sharing your data

Lesson 4: Sharing your data

It will probably take you about 30 minutes to complete this lesson.

In previous lessons, you used Discoverer to retrieve and analyze sales data. Once you have created reports, you typically want to share the reports with other Discoverer users or other organizations.

In this lesson you will learn how to use Discoverer to print and export worksheets, and share worksheets with other Discoverer users.

This lesson consists of the following exercises:

- "Exercise 1: Printing a worksheet"
- "Exercise 2: Exporting data to Microsoft Excel spreadsheet format"
- "Exercise 3: Sharing workbooks"
- "Lesson summary"
- "Tutorial summary"

Exercise 1: Printing a worksheet

In this exercise you will learn how to print worksheet data. You will print a worksheet in the Video Tutorial Workbook to show data for the year 2000. Discoverer provides the Print Wizard to take you step-by-step through the printing process.

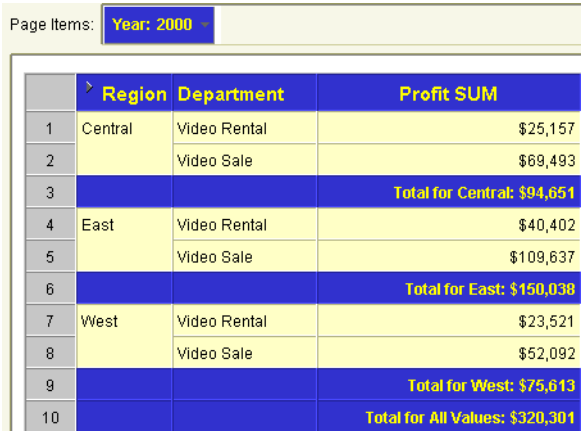
To print a worksheet:

1. Connect to the Video Store Tutorial database and open the Video Tutorial Workbook.

Hint: See Lesson 1: "Exercise 1: Starting Discoverer Plus" and "Exercise 2: Opening the tutorial workbook".

2. Display the Tabular Layout worksheet.

Figure 5–1 Tabular Layout worksheet in Video Tutorial Workbook workbook



Page Items: Year: 2000

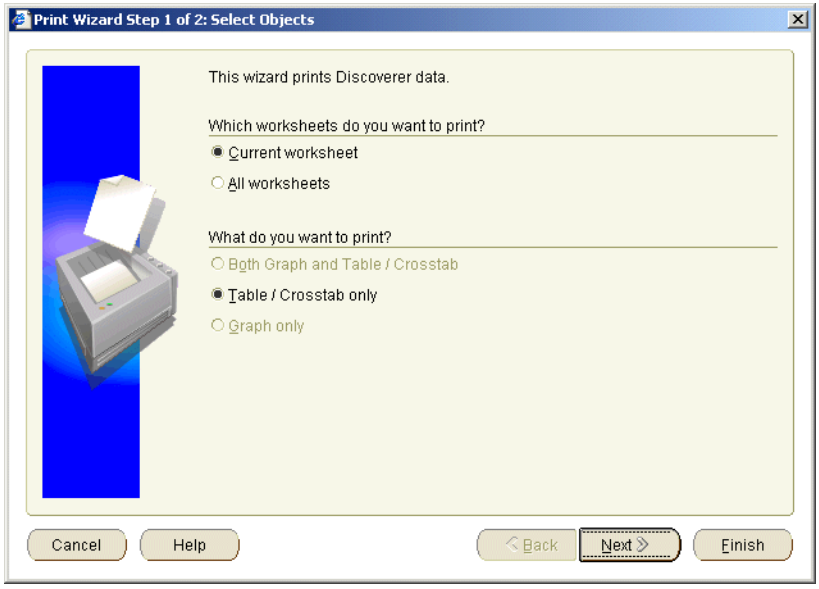
	Region	Department	Profit SUM
1	Central	Video Rental	$25,157
2		Video Sale	$69,493
3			Total for Central: $94,651
4	East	Video Rental	$40,402
5		Video Sale	$109,637
6			Total for East: $150,038
7	West	Video Rental	$23,521
8		Video Sale	$52,092
9			Total for West: $75,613
10			Total for All Values: $320,301

In this example, you only want to print data for the year 2000.

Hint: If you wanted to print data for all years available, you would select 'All' from the **Year** drop down list in the Page Items area, or pivot the Year item to the body of the worksheet so that data for all years was displayed on the worksheet.

3. Choose 2000 from the **Year** drop down list in the Page Items area.
4. Choose File | Print to display the Print Wizard: Select Objects dialog.

Figure 5–2 Print Wizard: Select Objects dialog



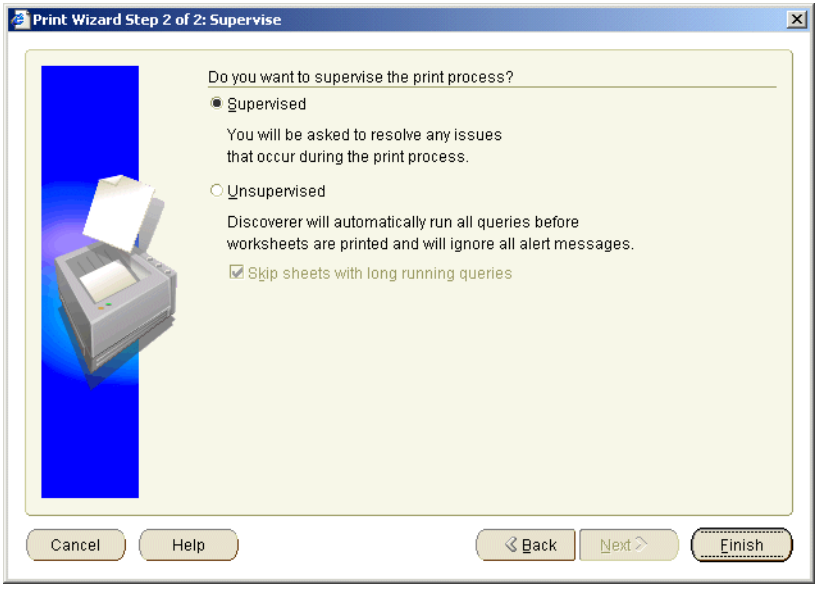
The Print Wizard: Select Objects dialog enables you to select which worksheets to print. In this case, you want to print the current worksheet only.

5. Select the **Current worksheet** radio button.

   Notice that the **Table/Crosstab only** radio button is selected by default. This is because the tutorial workbook does not contain graphs.

6. Click Next to display the Print Wizard: Supervise dialog.

Figure 5–3 Print Wizard: Supervise dialog

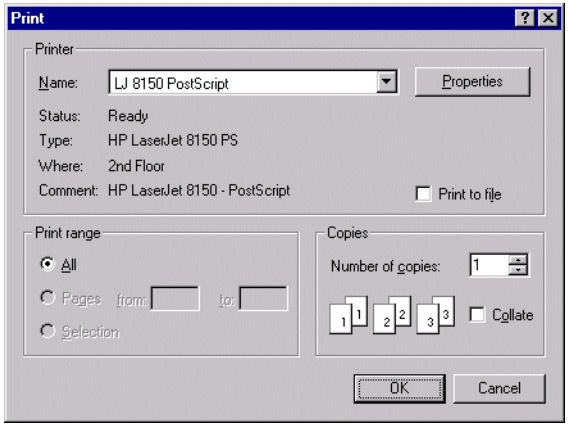


The Print Wizard: Supervise dialog enables you to choose whether to monitor the printing process.

To make sure that the most current data is printed, Discoverer refreshes the worksheet before printing it to make sure that the worksheet contains up-to-date data. Sometimes issues arise during the printing process (e.g. the query used to generate the report might exceed the maximum recommended time). You can specify whether you want to resolve such issues, or whether you want Discoverer to ignore them.

7. Select the **Supervised** radio button.
8. Click Finish to send the report to the default printer.
9. If the Windows print dialog is displayed, select the printer that you want to use from the **Printer Name** drop down list, then click OK.

Figure 5–4 Windows Print dialog



In this exercise you have learned how to print worksheets in Discoverer. Now you are ready to learn how to export Discoverer worksheets to other popular application formats.

Notes:

- To quickly print the current worksheet as it is displayed on screen without using the Print Wizard, you can also use the printer icon on the Discoverer toolbar.

Exercise 2: Exporting data to Microsoft Excel spreadsheet format

In this exercise you will learn how to export worksheet data to Microsoft Excel format.

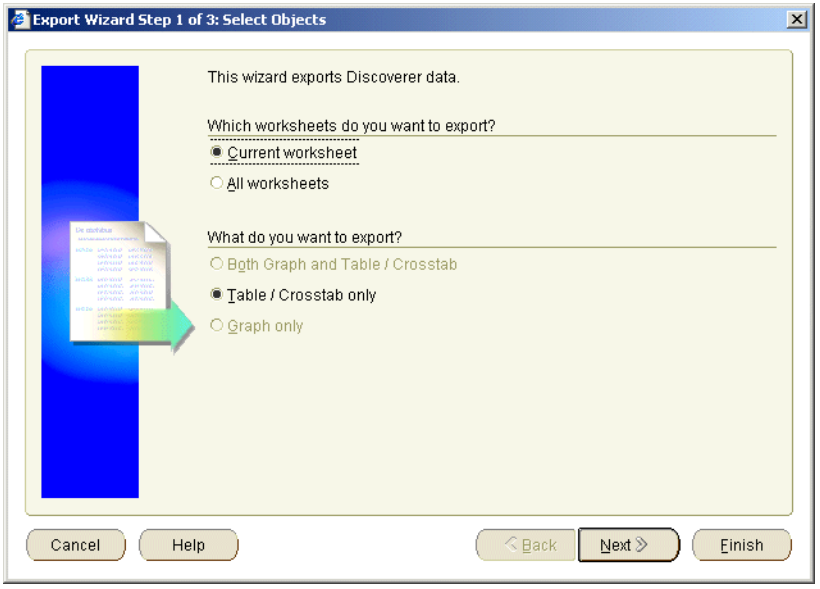
You might want to share Discoverer data with people or organizations that do not have Discoverer. For example, they might have the Microsoft Excel spreadsheet package. Discoverer enables you to export worksheets in a range of commonly used application formats. Discoverer provides you with the Export Wizard to take you step-by-step through the export process. You will export a worksheet in the Video Tutorial Workbook tutorial workbook to Microsoft Excel format.

Note: Before you can display a Discoverer worksheet in Microsoft Excel, you must have the appropriate security settings on your machine to enable macros to be run. Contact the Discoverer manager for more information.

To export to Microsoft Excel format:

1. Display the Tabular Layout worksheet if it is not already displayed.
2. Choose File | Export to display the Export Wizard: Select Objects dialog.

Figure 5–5 Export Wizard: Select Objects dialog

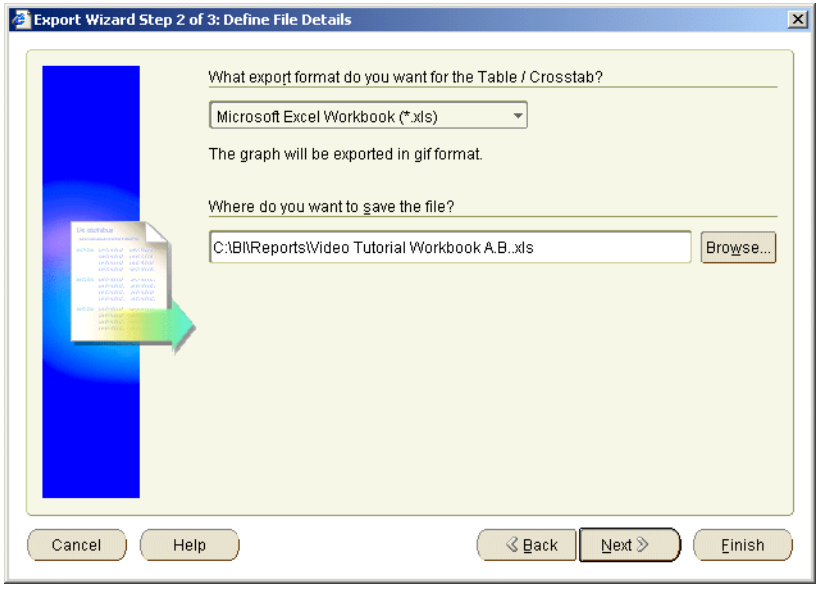


The Export Wizard: Select Objects dialog enables you to select which worksheets to export.

3. Select the **Current Sheet** radio button.

   Notice that the **Table/Crosstab only** radio button is selected by default. This is because the tutorial workbook does not contain graphs.
4. Click Next to display the Export Wizard: Define File Details dialog.

Figure 5–6 Export Wizard: Define File Details dialog



The Export Wizard: Define File Details dialog enables you to select the export format and target location of the export file.

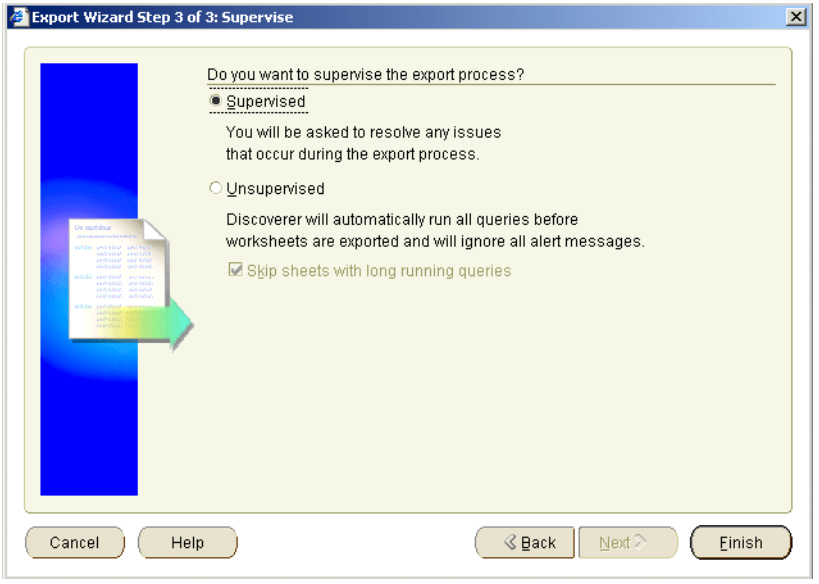
5. Choose Microsoft Excel workbook (*.xls) from the **What export format do you want?** drop down list.

   Notice that you can also export to many other formats, including Text (*.txt), CSV (*.csv), and Formatted Text (*.prn).

6. Do not change the default directory path and filename in the **Where do you want to save the file?** field (unless you want to save the export file in a different location).

7. Click Next to display to the Export Wizard: Supervise dialog.

Figure 5–7 Export Wizard: Supervise dialog



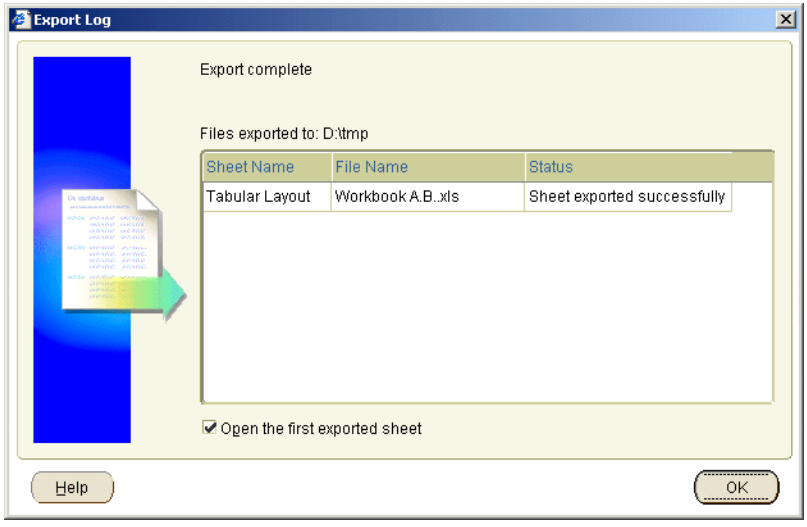
The Export Wizard: Supervise dialog enables you to choose whether to monitor the export process.

To make sure that the most current data is exported, Discoverer refreshes the worksheet before exporting it to make sure that the worksheet contains up-to-date data. Sometimes issues arise during the export process (e.g. the query used to generate the report might exceed the maximum recommended time). You can specify whether you want to resolve such issues, or whether you want Discoverer to ignore them.

8. Select the **Supervised** radio button.
9. Click Finish to export the worksheet and display the Export Wizard: Export Log dialog.

   Discoverer exports the worksheet to Excel format and saves it in the location you specified.

Figure 5–8 Export Wizard: Export Log dialog



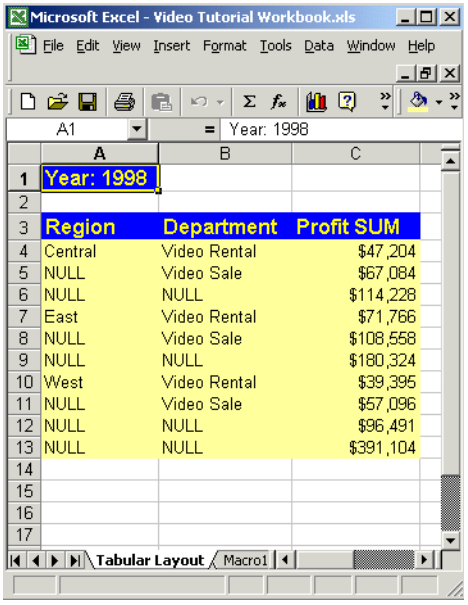
The Export Wizard: Export Log dialog shows you which export files were produced and whether any issues arose during the export.

10. (optional) If you have Microsoft Excel installed on your computer, select the **Open the first exported sheet?** check box.

11. Click OK to close the Export Wizard: Export Log dialog.

If you have Microsoft Excel installed on your computer and previously selected the **Open the first exported sheet?** check box, the exported worksheet is displayed in a Microsoft Excel spreadsheet.

Figure 5–9 Discoverer worksheet exported to Microsoft Excel



	A	B	C
1	Year: 1998		
2			
3	Region	Department	Profit SUM
4	Central	Video Rental	$47,204
5	NULL	Video Sale	$67,084
6	NULL	NULL	$114,228
7	East	Video Rental	$71,766
8	NULL	Video Sale	$108,558
9	NULL	NULL	$180,324
10	West	Video Rental	$39,395
11	NULL	Video Sale	$57,096
12	NULL	NULL	$96,491
13	NULL	NULL	$391,104
14			
15			
16			
17			

If you did not previously select the **Open the first exported sheet?** check box, run the Microsoft Excel application and open the export file.

In this exercise you have learned how to export Discoverer data to Microsoft Excel format. Now you are ready to learn how to share Discoverer worksheets with other Discoverer users.

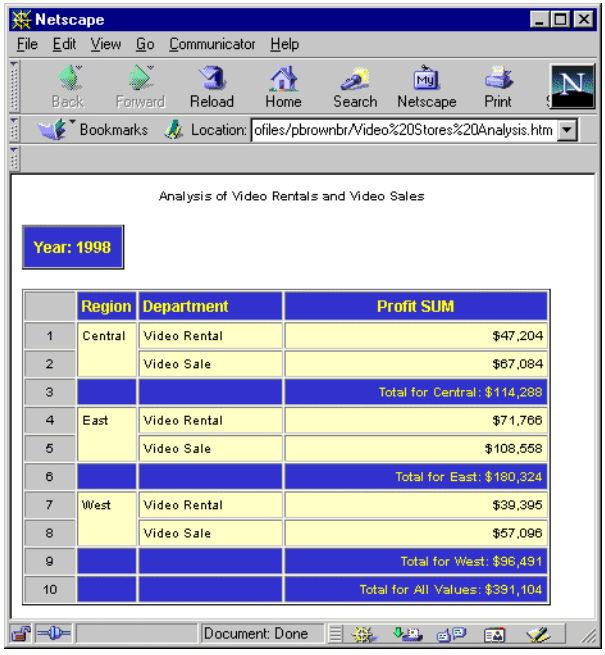
Notes:

- As a shortcut, you can clicking the Export to Excel icon on the toolbar (or by choosing File | Export to Excel) to quickly export the current worksheet (i.e. instead of using the Export Wizard).
- To export a worksheet to Web format (i.e. HTML format), repeat the lesson, with the following changes:

  1. In the Export Wizard: Define File Details dialog, choose Hyper-Text Markup Language (*.htm) from the '**What export format do you want?**' drop down list.

     The exported worksheet is displayed in a Web browser (see figure below).

Figure 5–10 Discoverer worksheet exported to HTML format



Exercise 3: Sharing workbooks

In this exercise you will learn how to enable other Discoverer users to access your workbooks using Discoverer Plus or Discoverer Viewer.

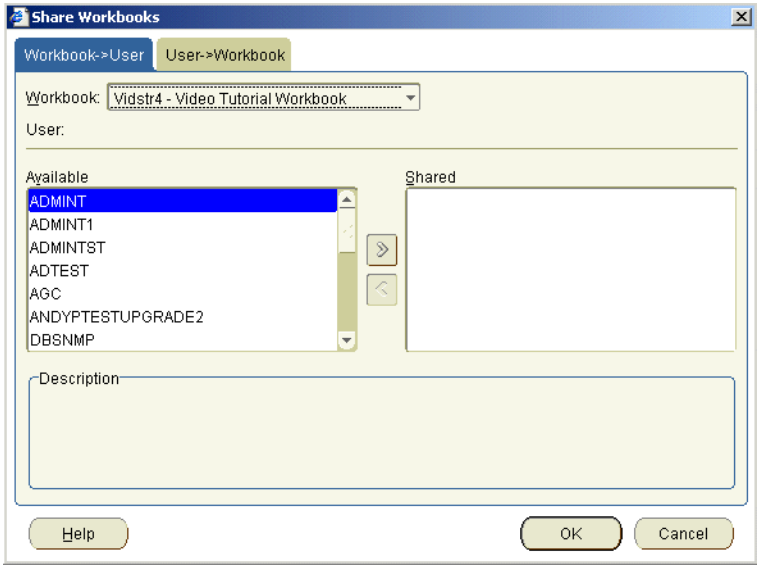
When you give other Discoverer users access to workbooks, you can do one of the following:

- give access to named users individually
- give access to all users

In this exercise, you will give access to all users using a public user ID called 'Public'.

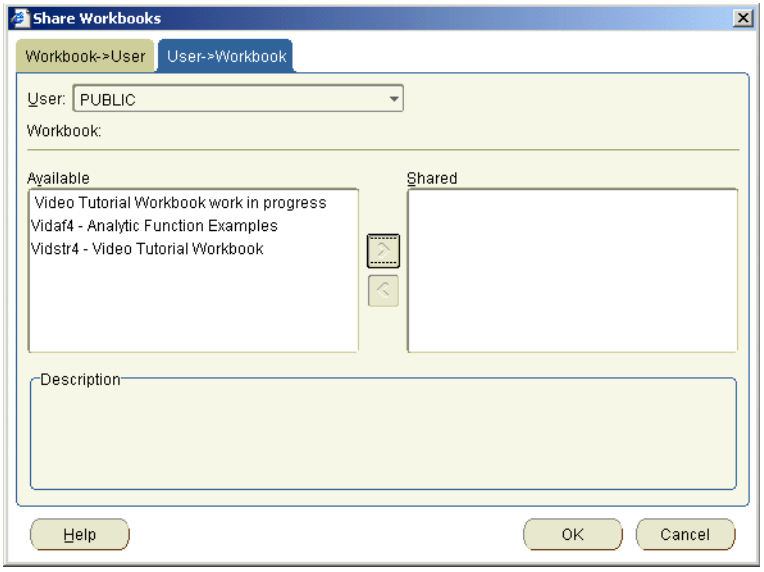
1. Choose File | Manage workbook | Sharing to display the Share workbooks dialog.

Figure 5–11 Share Workbooks dialog



2. Display the User > Workbook tab.

Figure 5–12 Share Workbooks: User > Workbook tab



3. Choose PUBLIC from the **User** drop down list
4. To share the Video Tutorial Workbook workbook, move the Video Tutorial Workbook workbook from the **Available** list to the **Shared** list.
5. Click OK to save the details and close the Share Workbooks dialog.

   You have now shared the Video Tutorial Workbook workbook with other Discoverer users in your organization who are part of the PUBLIC role. Every time you update the workbook, public users will get the most current version.

Lesson summary

As you can see, Discoverer provides you with a wide range of options for sharing your results with others. In this lesson you:

- printed a worksheet
- exported a worksheet to Microsoft Excel format
- shared a workbook with other Discoverer users, enabling those users to access the workbook using Discoverer

Tutorial summary

Congratulations on completing the tutorial!

Now that you have learnt the basic Discoverer concepts, you can use your new skills to now go on to explore Discoverer's powerful range of analysis features.

Remember, if you have questions about using the product, use Discoverer's online Help and context-sensitive Help buttons.

Glossary

Analytic functions

Analytic functions compute an aggregate value based on a group of rows. The group of rows is called a window and is defined by the analytic clause. Analytic functions differ from aggregate functions in that they return one value for each row. For example, if you create a ranking function, you create a rank value for each row.

For more information about Oracle9*i* functions, refer to *Oracle9i SQL Reference* or *Oracle9i Data Warehousing Guide.*

Business area

A business area is a collection of related information in the database. The Discoverer manager works with the different departments in your organization to identify the information that each department requires from the database.

Calculation

Calculations are worksheet items based on formulas or expressions (e.g. mathematical formulas, text handling functions, analytic functions).

Condition

Conditions are worksheet items that enable you to select what data to display on worksheets. Conditions filter out data that you are not interested in, enabling you to concentrate on data that you want to analyze. For example, you might use a condition to display only data for the month January.

Data Point

Data points are numerical data, such as sales, cost, or profits. There are two kinds of data points:

- detail data points - single values, such as one sale or the cost of one product
- aggregate data points - summary values, such as total profit over a year or quarter

Folder

A folder is a container used to group related information in the Discoverer End User Layer. For example, when using the Discoverer Item Navigator to choose items, you might find information relating to customers in a Customers folder. Folders can also contain other Discoverer items such as calculations, percentages, and totals. For more information, see "Exercise 9: Adding items to the worksheet".

Item

Items are different types of information stored in a folder. For example, if a Products folder contains reference numbers, descriptions, and the price of each product, the items in the Products folder are reference number, description, and price. In a worksheet, items appear as column and row headings.

List of values

A List of values (LOV) is a list of valid values for an item. For example, a LOV for a year item might contain the values 1998, 1999, and 2000.

Page item

A page item is a filtering item located above a worksheet in the Page Items area. Page items enable you to look at one area of information at a time. For example, if an item called Month is placed in the Page Items area, you might select January from the page item drop down list to produce a January report, then select February to produce a February report and so on.

Parameter

Parameters are workbook items that enable Discoverer users to enter dynamic input values used to analyze worksheets. Input values are typically used to:

- provide input to conditions that are used to filter worksheets - for example, when a workbook or worksheet is opened or refreshed, the parameter is used to first ask the worksheet user 'What month do you want to analyze?'. This enables a worksheet to look at data for a single month only (e.g. January).
- provide input to calculations - for example, a worksheet user can enter the value '3' when prompted to enter a banding value. This value is then used to divide data into three bands using a predefined calculation containing a banding function.

Query

A query is a question that Discoverer asks the database in order to get the data that you want to analyze.

Every time you open a worksheet or create a new worksheet, Discoverer sends a query to the database. For example, how did Product A sell last month?

Note: Queries are written in Structured Query Language (SQL), a language that databases understand. You do not need to understand SQL to communicate with the database - Discoverer writes the SQL query for you!

Rank

A rank is the league table position of a particular value in relation to other values. For example, if you calculate the rank of a set of values in ascending order (highest first), the highest value has the rank 1, the second highest value has the rank 2 etc.

The analytic function RANK() calculates the ranking position of each row in a set of rows.

Workbook

Workbooks are Discoverer files that contain worksheets displaying data retrieved from the database.

If you are familiar with spreadsheet applications (e.g. Microsoft Excel), think of a workbook as a spreadsheet file.

Worksheet

Worksheets contain the data that you want to analyze, together with a number of Discoverer components to help you analyze the data. For example, a worksheet can contain parameters, totals, percentages, exceptions, and calculations.

If you are familiar with spreadsheet applications (e.g. Microsoft Excel), think of a worksheet as a sheet in a spreadsheet file (or workbook).

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